

PUBLICATION LIST Patrick Willems

Articles in internationally reviewed journals:

- Willems P. (1999), 'Stochastic generation of spatial rainfall for urban drainage areas', *Water Science and Technology*, 39(9), 23 – 30
- Willems P. & J. Berlamont (1999), 'Probabilistic modelling of sewer system overflow emissions', *Water Science and Technology*, 39(9), 47 – 54
- Willems P. (2000), 'Compound intensity/duration/frequency-relationships of extreme precipitation for two seasons and two storm types', *Journal of Hydrology*, 233, 189 – 205
- Willems P. (2001), 'Stochastic description of the rainfall input errors in lumped hydrological models', *Stochastic Environmental Research and Risk Assessment*, 15, 132-152
- Vaes G., Willems P., Berlamont J. (2001), 'Rainfall input requirements for hydrological calculations', *Urban Water*, 3(1-2), 107-112
- Willems P. (2001), 'A spatial rainfall generator for small spatial scales', *Journal of Hydrology*, 252, 126-144
- Radwan M., El-Sadek A., Willems P., Feyen J., Berlamont J. (2001), 'Modeling of nitrogen in river water using a detailed and a simplified model', *TheScientificWorldJOURNAL*, 1(S2), 200-206
- Willems P., Berlamont J. (2002), 'Accounting for the spatial rainfall variability in urban modelling applications', *Water Science & Technology*, 45(2), 105-112
- Vaes G., Willems P., Berlamont J. (2002), '100 years of rainfall registration: are there trends?', *Water Science & Technology*, 45(2), 55-61
- Willems P., Berlamont J. (2002), 'Probabilistic emission and immission modelling: Case-study of the combined sewer - WWTP - receiving water system at Dessel (Belgium)', *Water Science & Technology*, 45(3), 117-124
- Radwan M., Willems P., Berlamont J. (2003), 'Modelling of dissolved oxygen and biochemical oxygen demand in river water using a detailed and a simplified model', *Journal of River Basin Management*, 1(2), 97-103
- Radwan M., Willems P., Berlamont J. (2004), 'Sensitivity and uncertainty analysis for river water quality modelling', *Journal of Hydroinformatics*, 06.2, 83-99
- Vaes G., Willems P., Berlamont J. (2005), 'Areal rainfall correction coefficients for small urban catchments', *Atmospheric Research*, 77, 48-59
- Guillou A., Willems P. (2006), 'Application de la théorie des valeurs extrêmes en hydrologie', *Revue de Statistique Appliquée*, LIV (2), 5-31
- Buytaert W., Céleri R., Willems P., De Bièvre B., Wyseure G. (2006), 'Spatial and temporal rainfall variability in mountainous areas. A case study from the south Ecuadorian Andes', *Journal of Hydrology*, 329, 413-421
- Opere A.O., Mkhanda S., Willems P. (2006), 'At site flood frequency analysis for the Nile Equatorial basins', *Physics and Chemistry of the Earth*, 31, 919-927
- Willems P. (2006), 'Random number generator or sewer water quality model?', *Water Science & Technology*, 54(6-7), 387-394
- Rouhani H., Willems P., Wyseure G., Feyen J. (2007), 'Parameter estimation in semi-distributed hydrological catchment modeling using a multi-criteria objective function', *Hydrological Processes*, 21(22), 2998-3008
- Céleri R., Willems P., Buytaert W., Feyen J. (2007), 'Space-time rainfall variability in the Paute Basin, Ecuadorian Andes', *Hydrological Processes*, 21(24), 3316-3327, doi:10.1002/hyp.6575

- Willems P., Guillou A., Beirlant J. (2007), 'Bias correction in hydrologic GPD based extreme value analysis by means of a slowly varying function', *Journal of Hydrology*, 338, 221-236
- Willems P., de Lange W.J. (2007), 'Concept of technical support to science-policy interfacing with respect to the implementation of the European Water Framework Directive', *Environmental Science & Policy*, 10, 464-473
- Thorndahl S., Willems P. (2007), 'Probabilistic modeling of overflow, surcharge, and flooding in urban drainage using the First Order Reliability Method and parameterization of local rain series', *Water Research*, 42, 455-466
- Vázquez R.F., Willems P., Feyen J. (2007), 'Improving the predictions of a MIKE SHE catchment-scale application by using a multi-criteria approach', *Hydrological Processes*, DOI: 10.1002/hyp.6815
- Rubarenzya M-H, Willems P., Berlamont J. (2007), 'Identification of uncertainty sources in distributed hydrological modelling. Case study of the Grote Nete catchment in Belgium', *Water SA*, 33(5), 633-642
- Rubarenzya M-H, Graham D., Feyen J., Willems P., Berlamont J. (2007), 'A site-specific land and water management model in MIKE SHE', *Nordic Hydrology*, 38(4-5), 333-350
- Radwan M., Willems P. (2008), 'Uncertainty analysis for river quality measurements', *International Journal of Ecological Economics & Statistics (IJEES)*, 11(S08), 21-30
- Ntegeka V., Willems P. (2008), 'Trends and multidecadal oscillations in rainfall extremes, based on a more than 100 years time series of 10 minutes rainfall intensities at Uccle, Belgium', *Water Resources Research*, 44, W07402, doi:10.1029/2007WR006471
- Willems P. (2008), 'Quantification and relative comparison of different types of uncertainties in sewer water quality modelling', *Water Research*, 42, 3539-3551
- Willems P. (2009), 'A time series tool to support the multi-criteria performance evaluation of rainfall-runoff models', *Environmental Modelling & Software*, 24(3), 311-321
- Breuer L., Huisman J.A., Willems P., Bormann H., Bronstert A., Croke B.F.W., Frede H., Gräff T., Hubrechts L., Jakeman A.J., Kite G.W., Lanini J., Leavesley G., Lettenmaier D.P., Lindström G., Seibert J., Sivapalan M., Viney N.R. (2009), 'Assessing the impact of land use change on hydrology by ensemble modelling (LUCHEM) I: Model intercomparison of current land use', *Advances in Water Resources*, 32(2), 129-146
- Viney N.R., Bormann H., Breuer L., Bronstert A., Croke B.F.W., Frede H., Gräff T., Hubrechts L., Huisman J.A., Jakeman A.J., Kite G.W., Lanini J., Leavesley G., Lettenmaier D.P., Lindström G., Seibert J., Sivapalan M., Willems P. (2009), 'Assessing the impact of land use change on hydrology by ensemble modelling (LUCHEM) II: Ensemble combinations and predictions', *Advances in Water Resources*, 32(2), 147-158
- Huisman J.A., Breuer L., Bormann H., Bronstert A., Croke B.F.W., Frede H., Gräff T., Hubrechts L., Jakeman A.J., Kite G.W., Lanini J., Leavesley G., Lettenmaier D.P., Lindström G., Seibert J., Sivapalan M., Viney N.R., Willems P. (2009), 'Assessing the impact of land use change on hydrology by ensemble modelling (LUCHEM) III: Scenario analysis', *Advances in Water Resources*, 32(2), 159-170
- Staes J., Rubarenzya M-H., Meire P., Willems P. (2009), 'Modelling hydrological effects of wetland restoration: a differentiated view', *Water science and technology*, 59(3), 433-441
- Vaes G., Willems P., Swartenbroekx P., Kramer K., de Lange W., Kober K. (2009), 'Science-policy interfacing in support of the Water Framework Directive implementation', *Water science and technology*, 60(1), 47-54
- Goormans T., Engelen D., Bouteligier R., Willems P., Berlamont J. (2009), 'Design of self-cleansing sanitary sewer systems with the use of flushing devices', *Water Science and Technology*, 60(4), 901-908
- Rouhani H., Willems P., Feyen J. (2009), 'Effect of watershed delineation and areal rainfall distribution on runoff prediction using the SWAT model', *Hydrology Research*, 40(6), 505-519

- Baguis P., Roulin E., Willems P., Ntegeka V. (2009), 'Climate change scenarios for precipitation and potential evapotranspiration over central Belgium', *Theoretical and Applied Climatology*, 99(3-4), 273-286
- Elsawwaf M., Willems P., Pagano A., Berlamont J. (2009), 'Evaporation estimates from Lake Nasser, Egypt, based on 3 floating stations data and Bowen ratio energy budget', *Theoretical and Applied Climatology*, doi:10.1007/s00704-009-0168-z
- Willems P. (2010), 'Parsimonious Model for Combined Sewer Overflow Pollution', *Journal of Environmental Engineering*, 136(3), 316-325
- Huang Y., Chen X., Li Y.P., Willems P., Liu T. (2010), 'Integrated modeling system for water resources management of Tarim River Basin', *Environmental Engineering Science*, 27(3), 255-269
- Nyeko P.O., Ngirane-Katashaya G., Willems P., Ntegeka V. (2010), 'Evaluation and inter-comparison of Global Climate Models' performance over Katonga and Ruizi Catchments in Lake Victoria Basin', *Physics and Chemistry of the Earth*, 35 (13-14), 618-633; doi:10.1016/j.pce.2010.07.037
- Taye M.T., Ntegeka V., Ogiramo N.P., Willems P. (2010), 'Assessment of climate change impact on hydrological extremes in two source regions of the Nile River Basin', *Hydrol. Earth Syst. Sci. Discuss.*, 7, 5441-5465, doi:10.5194/hessd-7-5441-2010
- Basher M.A., Liu T., Kabir M.A., Ntegeka V., Willems P. (2010), 'Climate change impact on the hydrological extremes in the Kaidu River Basin, China', *Journal of Flood Engineering (IFE)*, Vol. 1, No. 2
- Baguis P., Roulin E., Willems P., Ntegeka V. (2010), 'Climate change and hydrological extremes in Belgian catchments', *Hydrol. Earth Syst. Sci. Discuss.*, 7, 5033-5078, doi:10.5194/hessd-7-5033-2010
- El-Sawwaf M., Willems P., Feyen J. (2010), 'Assessment of the sensitivity and prediction uncertainty of evaporation models applied to Nasser Lake, Egypt', *Journal of Hydrology*, doi:10.1016/j.jhydrol.2010.10.002
- Lan-Anh N.T., Willems P. (2010), 'Adopting the downward approach in hydrological model development: the Bradford catchment case study', *Hydrological Processes*, 25(11), doi: 10.1002/hyp.7927
- Poelmans, L., Van Rompaey, A., Ntegeka, V., Willems, P. (2011), 'The relative impact of climate change and urban expansion on river flows: a case study in central Belgium', *Hydrological Processes*, 25(18), 2846-2858, doi: 10.1002/hyp.8047
- Taye M.T., Ntegeka V., Ogiramo N.P., Willems P. (2011), 'Assessment of climate change impact on hydrological extremes in two source regions of the Nile River Basin', *Hydrology and Earth System Sciences*, 15, 209-222, doi: 10.5194/hess-15-209-2011
- Wilson G., Abbott D., De Kraker J., Pérez P., Terwisscha van Scheltinga C., Willems P. (2011), 'The lived experience of climate change': creating Open Educational Resources and virtual mobility for an innovative, integrative and competence-based track at Masters level', *International Journal of Technology Enhanced Learning*, 3(2), 111-123
- Willems P., Vrac M. (2011), 'Statistical precipitation downscaling for small-scale hydrological impact investigations of climate change', *Journal of Hydrology*, 402, 193-205
- Vanuytrecht, E., Raes, D. Willems, P. (2011), 'Considering sink strength to model crop production under elevated atmospheric CO₂', *Agricultural and Forest Meteorology*, 151(12), 1753-1762, doi:10.1016/j.agrformet.2011.07.011
- Liu, T., Willems, P., Pan, X.L., Bao, A.M., Chen, X., Veroustraete, F., Dong, Q.H. (2011), 'Climate change impact on water resource extremes in a headwater region of the Tarim basin in China', *Hydrol. Earth Syst. Sci. Discuss.*, 8, 6593-6637; *Hydrol. Earth Syst. Sci.*, 15, 3511-3527, doi:10.5194/hess-15-1-2011
- Veroustraete, F., Fang, H., Cheng, X., Bao, A.M., Dong, Q., Liu, T., Willems, P. (2011), 'Diachronic Mapping of LUCC in the Northwest of China over the last half Century: Conversion of CORONA Panchromatic reflectance into LANDSAT NDVI Imagery', *Insciences Journal*, 1(4), 194-210, doi:10.5640/insc.0104194

- Taye, M.T., Willems, P. (2011). 'Influence of climate variability on representative QDF predictions of the upper Blue Nile Basin', *Journal of Hydrology*, 411, 355-365, doi:10.1016/j.jhydrol.2011.10.019
- Willems, P., Molnar, P., Einfalt, T., Arnbjerg-Nielsen, K., Onof, C., Nguyen, V-T-V., Burlando, P. (2012), 'Rainfall in the urban context: forecasting, risk and climate change', *Atmospheric Research*, 103, 1-3, 10.1016/j.atmosres.2011.11.004
- Willems, P., Arnbjerg-Nielsen, K., Olsson, J., Nguyen, V.T.V. (2012), 'Climate change impact assessment on urban rainfall extremes and urban drainage: methods and shortcomings', *Atmospheric Research*, 103, 106-118, 10.1016/j.atmosres.2011.04.003
- Veroustraete, F., Li, Q., Verstraeten, W.W., Chen, X., Bao, A., Qinghan, D., Liu, T., Willems, P. (2012), 'Soil moisture content retrieval based on apparent thermal inertia for the Xinjiang province in China', *International Journal of Remote Sensing*, 33(12), 3870-3885, doi: 10.1080/01431161.2011.636080
- Van Steenbergen, N., Willems, P. (2012), 'Method for testing the accuracy of rainfall-runoff models in predicting peak flow changes due to rainfall changes, in a climate changing context', *Journal of Hydrology*, 414-415, 425-434, doi:10.1016/j.jhydrol.2011.11.017
- Liu, T., Willems, P., Feng, X.W., Bao, Anm., Chen, Xi, Veroustraete, F., Dong, Q.H. (2012), 'On the usefulness of remote sensing input data for spatially distributed hydrological modelling: case of the Tarim River basin in China', *Hydrological Processes*, 26(3), 335-344, doi:10.1002/hyp.8129
- Veroustraete F., Li Q., Verstraeten W., Chen X., Li J., Liu T., Dong Q., Willems P. (2012), 'The AMSL LST algorithm validated for the Xinjiang Autonomous Region in China', *International Journal of Remote Sensing*, 33(12), 3886-3905, doi: 10.1080/01431161.2011.636765
- Nyeko P.O., Willems P., Moges, S.A., Mutua, F. (2012), 'An elusive search for regional flood frequency estimates in the River Nile basin', *Hydrol. Earth Syst. Sci. Discuss.*, 9, 1-41, doi:10.5194/hessd-9-1-2012
- Willems, P. (in press), 'Model uncertainty analysis by variance decomposition', *Physics and Chemistry of the Earth*, doi:10.1016/j.pce.2011.07.003
- El-Sawwaf, M., Willems, P. (in press), 'Analysis of the climate variability on Lake Nasser evaporation based on the Bowen ratio energy budget method', *Journal of Environmental Biology*, 33, [in press]
- Mora, D., Willems, P. (in press), 'Decadal oscillations in rainfall and air temperature in the Paute River Basin - Southern Andes of Ecuador', *Theoretical and Applied Climatology*, doi:0.1007/s00704-011-0527-4 [in press]
- Boniphace, E.R., Willems, P. (in press), 'Impact of dependence in river flow data on flood frequency analysis based on regression in quantile plots: analysis and solutions', *Water Resources Research*, doi: 10.1029/2010WR010160 [in press]
- Willems, P., Kroeze, C., Lohr, A. (in press), 'The essential role of natural sciences in climate change Masters education', *International Journal of Innovation and Sustainable Development* [in press]
- Nguyen, L.A., Boxall, J., Saul, A., Willems, P. (in press). 'Integrated river flow modelling: a case study', *Urban Water Journal* [in press]
- Liu, T., Fang, H., Willems, P., Bao, A., Chen, X., Veroustraete, F., Dong, Q.H. (in press), 'On the relationship between historical land-use change and water availability: The case of the lower Tarim river region in Northwestern China', *Hydrological Processes*, doi:10.1002/hyp.9223 [in press]
- Goormans, T., Willems, P. (in press). 'Using local weather radar data for sewer system modelling: a case study in Flanders, Belgium', *Journal of Hydrologic Engineering*, doi:10.1061/(ASCE)HE.1943-5584.0000589 [in press]
- Taye, M.T., Willems, P. (in press). 'Temporal variability of hydro-climatic extremes in the Blue Nile basin', *Water Resources Research*, doi:10.1029/2011WR011466 [in press]
- Van Steenbergen, N., Ronsyn, J., Willems, P. (in press), 'Non-parametric data-based approach for probabilistic flood forecasting in support of uncertainty communication', *Environmental Modelling & Software*, doi:10.1016/j.envsoft.2012.01.013 [in press]

- Shrestha, N.K., Goormans, T., Willems, P. (in press), 'Evaluating the accuracy of C and X band weather radars and their application for stream flow simulation', *Journal of Hydroinformatics*, [in press]
- Ntegeka V., Willems P., Roulin E., Baguis P. (in revision), 'Developing tailored climate change scenarios for hydrological impact assessments', *Journal of Hydrology*, [in revision]
- Willems P. (in revision), 'VHM approach: transparent, step-wise and data mining based identification and calibration of parsimonious lumped conceptual rainfall-runoff models', *Journal of Hydrology*, [in revision]

Articles in other journals:

- Willems P., Pauwels G., Verbakel Y. (1994), 'Risico-analyse op tunnelsecties, The Chunnel een risicovolle onderneming', *Cement*, okt. 1994, 21-27
- Berlamont J., Vaes G., Willems P. (1994), 'Randvoorzieningen aan rioolstelsels', *Water*, 79, nov.-dec. 1994, 206-210
- Vaes G., Willems P., Berlamont J. (1994), 'Een kritische kijk op IDF-relaties', *Water*, 79, nov.-dec. 1994, 229-236
- Vaes G., Willems P., Berlamont J. (1995), 'Milieugerichte motivatie voor de vermindering van de impact vanwege riooloverstorten op de ontvangende oppervlaktewateren: deel 1', *Water*, 83, juli-aug. 1995, 137-142
- Vaes G., Willems P., Berlamont J. (1995), 'Milieugerichte motivatie voor de vermindering van de impact vanwege riooloverstorten op de ontvangende oppervlaktewateren: deel 2', *Water*, 84, sept.-okt. 1995, 182-186
- Willems P., Huysentruyt H., Berlamont J., Gonella M. (1996), 'Een dynamisch waterkwaliteitsmodel als beleidsinstrument', *Water*, 87, maart-april 1996, 59-66
- Plevoets B., Vanbrabant S., Van Dyck J., Willems P. (1998), 'Risicoanalyse van dijken langs de Grensmaas', *Water*, 99, maart-april 1998, 50-60
- Willems P., Van Looveren R., Sas M., Bogliotti C., Berlamont J. (1999), 'Praktische vergelijking van de modelleringspakketten MIKE11 en ISIS voor hydrodynamische modellering in het stroomgebied van de Dijle opwaarts van Leuven', *Water*, 1, juli 1999, 10 p.
- Van Looveren R., Willems P., Sas M., Bogliotti C., Berlamont J. (2000), 'Theoretische vergelijking van de modelleringspakketten ISIS en MIKE11 voor oppervlaktewaterkwantiteitsmodellering', *Water*, 3, maart 2000, 7p.
- Langeveld J., Willems P., Clemens F. (2001), 'Verslag INTERURBA II Lissabon, 19-22 februari 2001', *Rioleringswetenschap*, 2, 39-48
- Willems P. (2001), 'Probabilistische modellering van de immissie in ontvangende oppervlaktewateren', *Rioleringswetenschap*, 3, 43-59
- Vaes G., Willems P., Berlamont J., Clemens F.H.L.R. (2002), 'Ontwerpneerslag voor rioleringsberekeningen: vergelijking Vlaanderen versus Nederland', *Rioleringswetenschap*, 5, 11-30
- Vaes G., Willems P., Berlamont J. (2002), 'Selectie en compositie van representatieve hydrogrammen voor riviermodellering', *Water*, mei 2002, 8 p.
- Vaes G., Willems P., Berlamont J. (2002), 'Bewegende buien voor het ontwerp van riolen', *Rioleringswetenschap*, 6, 41-58
- Willems P. (2002), 'Methodologie voor integrale bekkenmodellering', *Water*, 4, 9 p.
- Vaes G., Willems P., Berlamont J. (2002), 'Het gebruik van bakmodellen voor de voorspelling van de invoer in waterloopmodellen ter plaatse van riooloverstorten', *Water*, 4, 11 p.

- Vaes G., Willems P., Berlamont J. (2004), 'Ruimtelijke neerslagcorrectiecoëfficiënten voor rioleringsberekeningen', *Rioleringswetenschap*, 15, 55-66
- Vaes G., Willems P. (2006), 'Filtertechniek voor het kwantificeren van parasitaire debieten in riolen', *Rioleringswetenschap*, 21, 28-33
- Bolle A., Demuyne A., Willems P., Bouteligier R., Berlamont J. (2006), 'Hydraulische modellering van de tweezijdige interactie tussen riool- en rivierstelsels', *Rioleringswetenschap*, 23, 46-56
- Willems P., Boukhris O., Berlamont J., Van Eerdenbrugh K., Viaene P., Blanckaert J. (2007), 'Impact van klimaatverandering op Vlaamse rivieren', *Het Ingenieursblad*, 29, 28-33
- Vaes G., Willems P. (2007), 'Neerslaginvoer voor hydrologische en hydraulische modellen', *Water*, 25, 10-15
- Barjas-Blanco T., Willems P., Berlamont J., De Moor B., Cauwenberghs K., Rombauts S., Raymaekers F. (2007), 'Real-time sturing van wachtbekkens', *Water*, 25, 42-47
- Willems P., Boukhris O., Berlamont J., Blanckaert J., Van Eerdenbrugh K., Viaene P. (2007), 'Impact van klimaatverandering op hydrologische extremen langs Vlaamse rivieren - testcase Dender', *Water*, 25, 55-60
- Willems P., Ntegeka V., Berlamont J. (2007), 'Analyse van trends en meerjarige schommelingen in de neerslagextremen op basis van de meer dan 100 jaar 10 minuten neerslag te Ukkel', *Rioleringswetenschap*, 26, 45-53
- Vaes G., Willems P. (2007), 'Filtertechniek voor het kwantificeren van parasitaire debieten in riolen', *Water*, 28, 82-84
- Vaes G., Willems P. (2007), 'Modellering van de hydraulische interactie tussen riolen en waterlopen', *Water*, 32, 19-23
- Timbe L., Willems P. (2007), 'Kwantificering van onzekerheden in rivieroverstromingsmodellering', *Water*, 32, 60-62
- Ronsyn J., Willems P., Van Eerdenbrugh K. (2007), 'Kwaliteitscontrole voorspellingsmodellen', *Water*, 32, 24-28
- Neyskens I., Smolders S., Willems P., Vaes G., Van Assel J., Vereecken H., Holvoet K. (2008), 'Tweezijdige modelkoppeling met OpenMI', *Rioleringswetenschap*, 30, 45-54
- Vaes G., Willems P., Swartenbroekx P., Kramer K., de Lange W., Kober K. (2008), 'Samenbrengen van onderzoek en beleid in de ondersteuning van de implementatie van de Europese Kaderrichtlijn Water', *Rioleringswetenschap*, 30, 11-19
- Willems P., De Smet L. (2008), 'Meer overstromingen in de toekomst? Hoe staan we daarvoor klaar?', *Science Connection*, 21, 41-42
- Willems P., Verwaest T., Vanneuville W., Berlamont J., Monbaliu J. (2008), 'Invloed van klimaatverandering op hydrologische extremen in Vlaanderen', *Het Ingenieursblad*, nr.11-12 (dec.2008), 28-33
- Willems P. (2009), 'Invloed van klimaatverandering op ontwerpparameters voor rioleringen en buffervoorzieningen', *Rioleringswetenschap*, 36, 15-29
- Willems P. (2009), 'Methodologie voor modellering van hydrologische extremen', *Stromingen*, jaargang 2009, kwartaal 4, 26-41
- Willems P., Ogiramoi N.P., Mutua F., Abdo G., Kabubi J., Fahmi A.H., Sonbol M., Lotfy A., Kimaro T.A., Mkhanda S., Opere A., Ibrahim Y.A., Kizza M., Tadesse L., Abdel Motaleb M., Farid S., Zaki A., Al-Weshah R. (2010), 'Regional Flood Frequency Analysis for the River Nile Basin', Mededelingen der Zittingen, Koninklijke Academie voor Overzeese Wetenschappen (Bull. Séanc. Acad. R. Sci. Outre-Mer / Meded. Zitt. K. Acad. Overzeese Wet.), 55(4), 555-570
- Mora D., Willems P. (2011), 'Characterization of main external climate influences in rainfall and air temperature in the Paute River Basin, Southern Andes of Ecuador', *Maskana*, 2(1), 31-47
- Willems, P. (2011), 'Evaluatie en actualisatie van de IDF-neerslagstatistieken te Ukkel', *WT-Afvalwater*, 6, 341-352

- Willems, P. (2012), 'Vlaamse neerslagstatistieken herzien - invloed van klimaatverandering versus natuurlijke klimaatschommelingen', *Riolering*, jaargang 18, februari 2012, 11-12

Editor of books or special issues, internationally recognised scientific publisher:

- Willems, P., Molnar, P., Einfalt, T., Arnbjerg-Nielsen, K., Onof, C., Nguyen, V-T-V., Burlando, P. (Eds.) (2012), 'Rainfall in the urban context: forecasting, risk and climate change', special issue *Atmospheric Research*, vol.103, Jan. 2012, Elsevier; ISSN 0169-8095
- Willems, P., Olsson, J., Arnbjerg-Nielsen, K., Nguyen, V-T-V. (Eds.) (2012), 'Practices and impacts of climate change on rainfall extremes and urban drainage', IWA Publishing, 200p., Paperback Print ISBN 9781780401256; Ebook ISBN 9781780401263

Articles in books, internationally recognised scientific publisher:

- Willems P. (1998), 'Hydrological applications of extreme value analysis', In: "Hydrology in a changing environment" (ed. Wheater H. and Kirby C.), John Wiley & Sons, Chichester, vol. III, 15-25
- Willems P., Berlamont J. (1998), 'Stochastic modelling of spatial rain cells', In: "Hydrology in a changing environment" (ed. Wheater H., Kirby C.), John Wiley & Sons, Chichester, vol. III, 307-318
- Luyckx G., Willems P., Berlamont J. (1998), 'Influence of the spatial variability of rainfall on sewer system design', In: "Hydrology in a changing environment" (ed. Wheater H., Kirby C.), John Wiley & Sons, Chichester, vol. III, 339-349
- Willems P., Radwan M., Popa D., El-Sadek A., Berlamont J. (2003), 'Surface water quantity and quality modelling by the complementary use of detailed and simplified models: Case-studies of Dender and Witte Nete watersheds – Belgium', In: "Monitoring and modelling catchment water quantity and quality" (ed. Verhoest N., Hudson J., Hoeben R., De Troch F.), IHP-VI: Technical Documents in Hydrology, No. 66, International Hydrological Programme UNESCO, 105-112
- Willems P. (2005), 'Uncertainties in Rainfall-Runoff Modeling', In: "Water Encyclopedia" (5 Volume Set; ed. Lehr J.H., Keeley J.; ISBN 0-471-44164-3), John Wiley & Sons Publishing, vol. 5, 297-303
- Rubarenzya M.H., Willems P., Berlamont J., Feyen J. (2006), 'Modelling of river valley rewetting and extreme events in the Nete catchment (Belgium)', In: "Floods, from defence to management" (ed. van Alphen J., van Beek E., Taal M.; ISBN 0-415-39119-9), Taylor & Francis Group, London, 757-761
- Bormann H., Breuer L., Croke B.F.W., Gräff T., Hubrechts L., Huisman J.A., Kite G.W., Lanini J., Leavesley G., Lindström G., Seibert J., Viney N.R., Willems P. (2007), 'Reduction of predictive uncertainty by ensemble hydrological modelling of discharge', In: "Uncertainties in the 'monitoring-conceptualisation-modelling' sequence of catchment research" (ed. Pfister L., Hoffmann L.), IHP-VI: Technical Documents in Hydrology, No. 81, International Hydrological Programme UNESCO, 133-139
- Willems P., Barjas Blanco T., Chiang P-K., Cauwenberghs K., Berlamont J., De Moor B. (2008), 'Real-time control of urban flooding', In: *Water & Urban Development Paradigms: Towards an integration of engineering, design and management approaches*, J.Feyen, K.Shannon, M.Neville (ed.), CRC Press, Taylor & Francis Group, 265-270 (ISBN 978-0-415-48334-6 Hardback; 978-0-203-88410-2 eBook)
- Boukhris O., Willems P., Vanneuville W. (2008), 'The impact of climate change on the hydrology in highly urbanized Belgian areas', In: *Water & Urban Development Paradigms: Towards an integration of engineering, design and management approaches*, J.Feyen, K.Shannon, M.Neville (ed.), CRC Press, Taylor & Francis Group, 271-276 (ISBN 978-0-415-48334-6 Hardback; 978-0-203-88410-2 eBook)
- Villazon M.F., Willems P. (2008), 'The importance of spill conceptualizations and head loss coefficients in a quasi two-dimensional approach for river inundation modelling', *FloodRisk 2008 Conference*, 30 Sept. – 2 Oct. 2008, Oxford, UK, In: *Flood Risk Management: Research and Practice* (Eds. Samuels et al.), Taylor & Francis Group, London, 305-315 (ISBN 978-0-415-48507-4)

- Boukhris O., Willems P. (2008), 'Climate change impact on hydrological extremes along rivers in Belgium', FloodRisk 2008 Conference, 30 Sept. – 2 Oct. 2008, Oxford, UK In: Flood Risk Management: Research and Practice (Eds. Samuels et al.), Taylor & Francis Group, London, 1083-1091 (ISBN 978-0-415-48507-4)
- 'Water Framework Directive: Model supported Implementation. A Water Manager's Guide' (2009), published by IWA Publishing, London, Eds. Fred F Hattermann and Zbigniew W Kundzewicz, Contributing authors: Alfred Becker, Andrea Castelletti, Geoffrey D. Gooch, Fred F. Hattermann, Stefan Kaden, Zbigniew W. Kundzewicz, Wim J. de Lange, Yann Laurans, Susanne Muhar, Claudia Pahl-Wostl, Rodolfo Soncini-Sessa, Per Stålnacke and Patrick Willems, 128 p.; ISBN: 9781843392736 (Chapter 1: Kundzewicz, Becker, Hattermann; Chapter 2: Becker, Soncini-Sessa, Castelletti, Hattermann, Willems, Stalnacke, Laurans, de Lange; Chapter 3: Hattermann, Willems, Kundzewicz; Chapter 4: Pahl-Wostl; Chapter 5: Willems, de Lange; Chapter 6: Becker, Castelletti, Gooch, Hattermann, Kaden, Kundzewicz, Laurans, Muhar, Soncini-Sessa, Stalnacke, Willems; Case study 2: Willems)
- de Lange, W.J., Plyson, J., Willems, P., Vansteenkiste, Th., Provost, F., Hatterman, F., Vaes, G., Swartenbroeckx, P. (2010), 'WISE-RTD – A Portal for Science & Technology Transfer to Policy Making & Implementation in Integrated Water Resources Management', In: "Water System Science and Policy Interfacing" (Ed. Ph.Quevauviller), Chapter 4.2, 310-332, RSCPublishing, doi: 10.1039/9781847556622, ISBN (print): 978-1-84755-861-9, ISBN (online): 978-1-84755-662-2
- Barjas Blanco, T., Willems, P., Chiang, P-K., Cauwenberghs, K., De Moor, B., Berlamont, J. (2010), 'Flood Regulation by means of Model Predictive Control', In: "Intelligent Infrastructures" (Eds. R.R. Negenborn, Z. Lukszo, and H. Hellendoorn), Springer, Series: Intelligent Systems, Control and Automation: Science and Engineering, Vol. 42, 529 p., 407-437, doi: 10.1007/978-90-481-3598-1_16, ISBN: 978-90-481-3597-4
- Shirazi R.H.S.M., Willems P. Berlamont J. (2010), 'Application of Flushing Tanks in Simple Sewer Networks for In-Sewer Sediment Erosion and Transport' (Chapter 7), in: Dynamic Modeling of Urban Water Systems, Monograph 18 (Ed. W. James), 544 p., published by CHI, Guelph, ON Canada; ISBN 978-0-9808853-3-0, 85-103
- Chiang, P-K., Willems, P. (2010), 'A conceptual river model to support real-time flood control (Demer river, Belgium)', River Flow 2010 (eds. A. Ditttrich, K. Koll, J. Aberle, P. Geisenhainer), Bundesanstalt für Wasserbau, Karlsruhe, Germany; Volume 2, 1407-1414; ISBN 978-3-939230-00-7
- Willems, P., Einfalt, T. (2012), 'Rainfall extremes and urban drainage', In: "Global Trends & Challenges in Water Science, Research and Management --- A compendium of hot topics and features from IWA Specialist Groups" (ed. Hong Li), International Water Association, London, 83-85; ISBN 9781780401065
- Nyeko-Ogiramoi, P., Willems, P., Ngirane-Katashaya, G. (2011), 'Nonparametric Statistical Downscaling of Precipitation from Global Climate Models', In: "Climate Models" (ed. L. Druyan), ISBN 979-953-307-338-4, [in press]

Papers at international conferences and symposia, published in full in proceedings:

- Willems P. (1996), 'Probabilistic design of urban drainage systems, concerning the impact on the receiving waters', 9th Junior Scientists Workshop on "Impact of urban runoff on wastewater treatment plants and receiving waters", Kilve, UK, 9-13 April 1996, Research report FR/WW 001, Foundation for Water Research, UK, 73-78
- Willems P., Huysentruyt H., Berlamont J., Gonella M. (1996), 'A water quality model as a management tool', International WEF Conference on "Urban Wet Weather Pollution", Quebec, June 1996, Proceedings (ISBN 1-57278-028-2), 2.49 - 2.60
- Willems P. (1998), 'Probabilistic modelling of hydrological and hydrodynamical systems considering different uncertainty-sources', International WIMEK Congress on "Options for closed water systems - sustainable water management", Wageningen, 11-13 March 1998, 8p.
- Willems P. (1999), 'Stochastic generation of spatial rainfall for urban drainage areas', International Conference on "Developments in urban drainage modelling", London, 21-24 Sept. 1998, Proceedings, 77-84

- Willems P., Berlamont J. (1999), 'Probabilistic modelling of sewer system overflow emissions', International Conference on "Developments in urban drainage modelling", Londen, 21-24 Sept. 1998, Proceedings, 213-220
- Vaes G., Willems P., Berlamont J. (1998), 'Assessment of combined sewer overflow emissions', International Conference on "Developments in urban drainage modelling", Londen, 21-24 Sept. 1998, Proceedings, 189-196
- Willems P., Berlamont J. (1999), 'Rainfall input uncertainty in hydrological models', International Conference on "Quality, management and availability of data for hydrology and water resources management", Koblenz, 22-26 March 1999, Proceedings, 127-129
- Vaes G., Willems P., Berlamont J. (1999), 'Rainfall input requirements for hydrological calculations', International Conference on "Quality, management and availability of data for hydrology and water resources management", Koblenz, 22-26 March 1999, 185-187
- Willems P., Vaes G., Berlamont J. (1999), 'Compound IDF-relationships and design storms for two seasons and storm types', 8th International Conference on "Urban Storm Drainage", Sydney, Aug. 1999, Proceedings (ISBN 0-85825-718-1), 897-904
- Radwan M., Willems P., Berlamont J. (1999), 'Rainfall-runoff modelling as part of integrated watershed management', International Workshop on "Modelling of transport processes in soils at various scales in time and space", Leuven, 24-26 Nov. 1999, Proceedings (ISSN 90-74134-76-9), 755-764
- Radwan M., Willems P., El-Sadek A., Berlamont J. (2000), 'Integrated catchment modelling: an application to Molenbeek catchment, Belgium', 5th International Water Technology Conference (IWTC-2000), Alexandria, Egypt, 3-5 March 2000, 175-185
- El-Sadek A., Feyen J., Radwan M., Willems P. (2000), 'Description of the nitrate balance as a function of the scale using a DRAINMOD-GIS technology', Integrated Water Resources Management Symposium, Davis CA, USA, 9-10 April 2000
- Van Looveren R., Willems P., Sas M., Bogliotti C., Berlamont J. (2000), 'Comparison of the software packages ISIS and Mike11 for the simulation of one-dimensional open channel flow', Hydrossoft 2000, Lisbon, June 2000, Proceedings, 11p.
- Radwan M., Willems P., Berlamont J. (2000), 'Lumped conceptual hydrological modelling in combination with GIS for integrated watershed management', ASCE Watershed Management Conference, Fort Collins, Colorado, USA, 21-24 June 2000, Proceedings, 12p.
- Willems P., Van Looveren R., Sas M., Bogliotti C., Berlamont J. (2000), 'Practical comparison of the modelling systems MIKE11 and ISIS for river flood modelling by the quasi two-dimensional approach', Hydroinformatics 2000, Iowa, 23-27 July 2000, CD-ROM Proceedings, 8 p.
- Bandy J., Willems P. (2000), 'Towards a more physically-based calibration of lumped conceptual rainfall-runoff models', Hydroinformatics 2000, Iowa, 23-27 July 2000, CD-ROM Proceedings, 12 p.
- Willems P., Popa D., Berlamont J. (2000), 'Pollution impact modelling: case-study of Witte Nete catchment - Belgium', Hydroinformatics 2000, Iowa, 23-27 July 2000, CD-ROM Proceedings, 8 p.
- El-Sadek A., Willems P., Christiaens K., Casteels C., Ducheyne S., Feyen J. (2000), 'Modelling of the nitrate balance at regional scale using a quasi two-dimensional mechanistic model in combination with GIS', Micro 2000 Congress, Oct. 2000, Cape Town, South Africa, Proceedings, 10 p.
- Willems P., Berlamont J. (2000), 'Probabilistic modelling of a combined sewer - WWTP - river system: case-study of the Witte Nete at Dessel (Belgium)', 5th International Symposium on "Systems analysis and computing in water quality management", Gent, 18-20 Sept. 2000, Proceedings, 6.25 - 6.30
- Willems P., Radwan M., Popa D., El-Sadek A., Berlamont J. (2000), 'Surface water quantity and quality modelling by the complementary use of detailed and simplified models : case-studies of Dender and Witte Nete watersheds - Belgium', International Conference on "Monitoring and modelling catchment water quantity and quality" (ERB 2000), Gent, 27-29 Sept. 2000, Proceedings, 153-156

- Vaes G., Willems P., Berlamont J. (2000), 'Selection and composition of representative hydrographs for river design calculations', International Conference on "Monitoring and modelling catchment water quantity and quality" (ERB 2000), Gent, 27-29 Sept. 2000, Proceedings, 53-55
- Radwan M., Willems P., Berlamont J. (2000), 'Assessment of surface water quantity and quality', International Symposium on "Wadi hydrology" (ICWH2000), Sharm-El-Sheikh, Egypt, 21-23 Nov. 2000, CD-ROM proceedings
- Willems P., Qvick A., Berlamont J. (2000), 'Development of an operational spatial rainfall model for Flanders', 5th International Workshop on "Precipitation in Urban Areas", Pontresina, Switzerland, 10-12 Dec. 2000, Proceedings, 105-110
- Vaes G., Willems P., Berlamont J. (2000), '100 years of rainfall registration: are there trends?', 5th International Workshop on "Precipitation in Urban Areas", Pontresina, Switzerland, 10-12 Dec. 2000, Proceedings, 66-72
- Willems P., Berlamont J. (2001), 'Probabilistic emission and immission modelling: Case-study of the combined sewer - WWTP - receiving water system at Dessel (Belgium)', 2nd International Conference on "Interactions between sewers, treatment plants and receiving waters in urban areas", Lisbon, 19-22 Febr. 2001, Proceedings, 117-124
- Willems P., Berlamont J. (2001), 'Probabilistic modelling of the immission of water and pollution from urban drainage systems in receiving watercourses', World Water and Environmental Resources (EWRI) Congress - Urban Drainage Modeling (UDM) Symposium, Orlando, 20-24 May 2001, In: "Urban Drainage Modeling", ASCE Publication (ed. Brashear R.W., Maksimovic C.; ISBN: 0-7844-0583-2), 10 p.
- Willems P., Christiaens K., Vaes G., Popa D., Timbe L., Berlamont J., Feyen J. (2001), 'Methodology for river flood modelling by the quasi two-dimensional approach', World Water and Environmental Resources (EWRI) Congress, Orlando, 20-24 May 2001, In: "Bridging the Gap: Meeting the World's Water and Environmental Resources Challenges", ASCE Publication (ed. Phelps D., Sehlke G.; ISBN 0-7844-0569-7)
- Radwan M., Willems P., El-Sadek A., Berlamont J. (2001), 'Water quality modelling as an environmental issue', International Symposium on "Water resources management", Halkidiki, Greece, 24-26 Sept. 2001, Proceedings, 185-194
- Radwan M., Willems P., Berlamont J. (2001), 'Control structures impact on river protection and development', 8th International Symposium on "River sedimentation", Cairo, Egypt, 3-5 Nov. 2001, Proceedings, 10p.
- Willems P., Vaes G., Popa D., Timbe L., Berlamont J. (2002), 'Quasi 2D river flood modelling', River Flow 2002: International Conference on Fluvial Hydraulics, Louvain-la-Neuve, 4-6 Sept. 2002, In: "River Flow 2002" (ed. Bousmar D., Zech Y.; ISBN 90-5809-509-6), Swets & Zeitlinger, Lisse, vol. 2, 1253-1259
- Schütze M., Willems P., Vaes G. (2002), 'Integrated simulation of urban wastewater systems – How many rainfall data do we need?', 9th International Conference on "Urban Drainage", Portland, 8-13 Sept. 2002, In: "Global solutions for urban drainage" (ed. Strecker E.W., Huber W.C.), GeoSyntec Consultants, Portland, 11 p.
- Vaes G., Clemens F., Willems P., Berlamont J. (2002), 'Design rainfall for combined sewer system calculations', 9th International Conference on "Urban Drainage", Portland, 8-13 Sept. 2002, In: "Global solutions for urban drainage" (ed. Strecker E.W., Huber W.C.), GeoSyntec Consultants, Portland, 15 p.
- Vaes G., Willems P., Berlamont J. (2002), 'Moving design storms for combined sewer systems', 9th International Conference on "Urban Drainage", Portland, 8-13 Sept. 2002, , In: "Global solutions for urban drainage" (ed. Strecker E.W., Huber W.C.), GeoSyntec Consultants, Portland, 15 p.
- Vaes G., Willems P., Berlamont J. (2002), 'The use of reservoir models for the assessment of the input from combined sewer overflows into river models', 9th International Conference on "Urban Drainage", Portland, 8-13 Sept. 2002, In: "Global solutions for urban drainage" (ed. Strecker E.W., Huber W.C.), GeoSyntec Consultants, Portland, 16 p.
- Willems P. (2003), 'Methodology for integrated catchment modelling', Integrated Modelling User Group (IMUG) International Conference, Tilburg, 23-25 April 2003, Proceedings, 8 p.; Best Paper Presentation Award

- Vaes G., Willems P., Berlamont J. (2003), 'Areal rainfall correction coefficients', 6th International Workshop on "Precipitation in Urban Areas", Pontresina, Switzerland, 4-7 Dec. 2003, Proceedings, 6 p.
- Vaes G., Willems P., Berlamont J. (2003), 'The use of design rainfall in the new Flemish urban drainage guidelines', 6th International Conference on "Precipitation in urban areas", Pontresina, Switzerland, 4-7 Dec. 2003, Proceedings, 5 p.
- Willems P. (2004), 'Parsimonious pollutant washoff and sewer transport modelling', 6th International Conference on "Urban Drainage Modelling" (UDM'04), Dresden, Germany, 15-17 Sept. 2004, Proceedings, 461-468
- Vázquez R.F., Willems P., Feyen J., Berlamont J. (2004), 'Multi-criteria evaluation of the performance of the MIKE SHE code applied at a catchment scale', 2004 ASAE/CSAE Annual International Meeting, Ottawa, Canada, 1-4 Aug. 2004, Proceedings, 14 p.
- Vázquez R.F., Willems P., Feyen J., Berlamont J. (2004), 'Effects of land cover trends on the distributed hydrologic predictions of a medium size catchment', AgEng 2004 Conference on "Engineering the future", Leuven, 12-16 Sept. 2004, Proceedings, 8 p.
- Vaes G., Willems P., Berlamont J. (2004), 'The use of design rainfall in the new Flemish urban drainage guidelines', International conference on "Hydrology: Science and Practice for the 21st Century", July 2004, Imperial College, London, In: "Hydrology: Science and Practice for the 21st Century" (ed. Webb B., Acreman M., Maksimovic C., Smithers H., Kirby C.; ISBN 1-903741-11-4), British Hydrological Society, vol. II, 346-353
- Willems P. (2004), 'Parsimonious model for combined sewer overflow pollution', 4th International Conference on "Sewer Processes & Networks", Funchal, Madeira, Portugal, 22-24 Nov. 2004, Proceedings, 10 p.
- Timbe L., Willems P. (2004), 'Uncertainties in flood simulation models', 2nd ACTIF workshop on "Quantification, reduction and dissemination of uncertainty in flood forecasting", WL/Delft Hydraulics, 22-23 Nov. 2004, Proceedings, 15 p.
- Rouhani H., Willems P., Feyen J. (2005), 'Evaluation of SWAT stream flow components for the Grote Nete River basin (Flanders, Belgium)', 3rd International SWAT Conference, Switzerland, July 2005, Proceedings, 8 p.
- Willems P. (2005), 'Relative comparison of different types of uncertainties in sewer water quality modelling', 10th International Conference on "Urban Drainage, Copenhagen", Denmark, 21-26 Sept. 2005, Proceedings, 8 p.
- Vaes G., P. Willems, J. Berlamont (2005), 'Filtering method for infiltration flow quantification', 10th International Conference on "Urban Drainage", Copenhagen, Denmark, 21-26 Sept. 2005, Proceedings, 7 p.
- Willems P., Sonbol M., Gamal S., Mkhanda A., Opere A., Tedesse L., Abdel Motaleb M., Farid S., Zaki A., Al-Weshah R. (2005), 'Regional flood frequency analysis in the Nile basin', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 18 p.
- Abdo G., Sonbol M., Willems P. (2005), 'Flood frequency analysis of the Eastern Nile rivers', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 14 p.
- Opere A., Mkhanda S., Willems P. (2005), 'At-site flood frequency analysis for the Nile Equatorial basins', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 13 p.
- Mkhanda S., Opere A.O., Willems P. (2005), 'Comparison between annual maximum and peaks over threshold models for flood frequency prediction', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 16 p.
- Sonbol M., Abdo G., Willems P., Abdel Motaleb M. (2005), 'The influence of river flooding on high flow extreme value analysis in the Nile basin', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 12 p.

- Opere A., Mkhanda S., Willems P. (2005), 'Homogeneity testing for peak flow in catchments in the Equatorial Nile basins', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 14 p.
- Tadesse L., Sonbol M., Willems P. (2005), 'At-site and regional flood frequency analysis of the upper Awash sub-basin in the Ethiopian Plateau', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 15 p.
- Fahmi A., Willems P. (2005), 'Analysis of the return periods of low flow hazards in Egypt and Sudan', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 11 p.
- Kabubi J., Mutua F., Willems P., Mngodo R. (2005), 'Low flow frequency analysis based on runoff subflow filtering and independent low flow periods selection for the Lake Victoria Basin', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 12 p.
- Mirghani M., Willems P. (2005), 'Statistical analysis of dry periods in seasonal rivers', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 10 p.
- Mirghani M., Willems P., Kabubi J. (2005), 'QDF relationships for low flow return period prediction', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 10 p.
- Willems P., Radwan M., El-Sadek A., Abdel-Gawad S. (2005), 'Hydrodynamic modelling of the Rosetta branch in the Nile Delta', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 17 p.
- Radwan M., Willems P., El-Sadek A., Abdel-Gawad S. (2005), 'Physico-chemical water quality modelling of the Rosetta branch in the Nile Delta', International Conference of UNESCO Flanders FIT FRIEND/Nile Project – "Towards a better cooperation", Sharm-El-Sheikh, Egypt, 12-14 Nov. 2005, CD-ROM Proceedings, 17 p.
- Timbe L., Willems P., Berlamont J. (2005), 'Validation of a quasi-2D hydrodynamic river flood model using historical and ERS-SAR derived flood maps', XXXI IAHR conference on "Water engineering for the future, choices and challenges", Seoul, 11-16 Sept. 2005, Proceedings, 137-147
- Ronsyn J., Deschamps M., Van Eerdenbrugh K., Willems P., Viaene P., Berlamont J. (2005), 'Quality control of flood forecasting models for navigable rivers in Flanders, Belgium', Workshop on "Innovation, advances and implementation of flood forecasting technology", Tromsø, Norway, 17-19 Oct. 2005, Proceedings, 11 p.
- Rubarenzya M.H., P. Willems, J. Berlamont & J. Feyen (2005), 'Risk assessment in distributed modelling: a case study of the Nete Basin', 15th Annual AEHS Meeting and West Coast Conference on "Soils, sediments and water", San Diego, 14-17 March 2005, Proceedings, 8 p.
- Rubarenzya M.H., Willems P., Berlamont J., Feyen J. (2005), 'Distributed modelling of the Nete catchment (Belgium) for rewetting and extreme event analysis', Ozwater Watershed conference, Brisbane, Australia, May 2005, Proceedings, 8 p.
- Rubarenzya M.H., Willems P., Berlamont J., Feyen J. (2005), 'Modelling of river valley rewetting and extreme events in the Nete catchment (Belgium)', 3th International Symposium on "Flood defence", Nijmegen, Nederland, 25-27 May 2005, Proceedings (ISBN 0415391202), 403-407
- Rubarenzya M.H., Willems P., Berlamont J., Feyen J. (2005), 'Applying MIKE SHE to define the influence of rewetting on floods in Flanders', 4th Inter-Celtic Colloquium on "Hydrology and management of water resources", Guimarães, Portugal, 11-14 July 2005, Proceedings, 9 p.
- Rubarenzya M.H., Willems P., Berlamont J., Feyen J. (2005), 'Construction, Calibration, and Validation of a Catchment Management Model for the Nete Catchment', WSTA Seventh Gulf Water Conference, Kuwait, 19-23 Nov. 2005, Proceedings, 527-537
- Viney N.R., Croke B.F.W., Breuer L., Bormann H., Bronstert A., Frede H., Gräff T., Hubrechts L., Huisman J.A., Jakeman A.J., Kite G.W., Lanini J., Leavesley G., Lettenmaier D.P., Lindström G.,

Seibert J., Sivapalan M., Willems P. (2005), 'Ensemble modelling of the hydrological impacts of land use change', MODSIM 2005 International Congress on "Modelling and simulation", Modelling and Simulation Society of Australia and New Zealand, December 2005, Proceedings (ISBN 0-9758400-2-9), 2967-2973

- Rubarenzya M.H., Willems P., Berlamont J., Feyen J. (2006), 'Application of multi-criteria tool in MIKE SHE model development and testing', World Water and Environmental Resources Congress 2006, Nebraska, 21-25 May 2006, Proceedings, 10 p.
- Rubarenzya M.H., Willems P., Feyen J., Berlamont J. (2006), 'Modeling of soil hydraulic processes and base flow in Flanders', World Water and Environmental Resources Congress 2006, Nebraska, 21-25 May 2006, Proceedings, 10 p.
- Bolle A., Demuyneck A., Willems P., Bouteligier R., Bosch S., Verwey A., Berlamont J. (2006), 'Hydraulic modelling of the two-directional interaction between sewer and river systems', International conference "Urban Drainage Modelling and Water Sensitive Urban Design 2006", Melbourne, 3-7 April 2006, Proceedings, V2.369 – V2.376
- Raes D., Willems P., Gbaguidi F. (2006), 'RAINBOW - a software package for analyzing data and testing the homogeneity of historical data sets', 4th International Workshop on "Sustainable management of marginal drylands", Islamabad, Pakistan, 27-31 Jan. 2006, Proceedings, 41-55
- Rouhani H., Feyen J., Willems P. (2006), 'Impact of watershed delineations on the SWAT runoff prediction: a case study in the Grote Nete catchment, Flanders, Belgium', 2006 IASME / WSEAS International Conference on "Water resources, hydraulics & hydrology", Chalkida, Evia Island, Greece, 11-13 May 2006, Proceedings, 6 p.
- Rubarenzya M.H., Feyen J., Willems P., Berlamont J. (2006), 'Multi-criteria development and testing of a site-specific model for land and water management', XXIV Nordic Conference, Vingsted Centret, Denmark, Proceedings, 8 p.
- Rubarenzya M.H., Staes J., Meire P., Feyen J., Willems P., Berlamont J. (2006), 'Terse on conjunctive hydrological and ecological modelling for rewetting studies in Flanders', International Multidisciplinary Conference on "Hydrology and ecology – The groundwater/ecology connection", Carlsbad, The Czech Republic, 11-14 Sept. 2006, Proceedings, 271-274
- Rubarenzya M.H., Feyen J., Willems P., Berlamont J., Staes J., Meire P. (2006), 'Synopsis on ecosystem based hydrological management: realisation and challenges', International Multidisciplinary Conference on "Hydrology and ecology – The groundwater/ecology connection", Carlsbad, The Czech Republic, 11-14 Sept. 2006, Proceedings, 325-328
- Rubarenzya M.H., Staes J., Meire P., Feyen J., Willems P., Berlamont J. (2006), 'Conjunctive hydrological and ecological modeling for rewetting studies in Flanders', International Multidisciplinary Conference on "Hydrology and ecology – The groundwater/ecology connection", Carlsbad, The Czech Republic, 11-14 Sept. 2006, Proceedings, 11 p.
- Rubarenzya M.H., Feyen J., Willems P., Berlamont J., Staes J., Meire P. (2006), 'Ecosystem based hydrological management: realisation and challenges', International Multidisciplinary Conference on "Hydrology and ecology – The groundwater/ecology connection", Carlsbad, The Czech Republic, 11-14 Sept. 2006, Proceedings, 14 p.
- Celleri R., Willems P., Feyen J. (2006), 'Effects of uncertain data on the modeling of two mountain basins of South Ecuador', ERB2006 Conference on "Uncertainties in the 'monitoring-conceptualisation-modelling' sequence of catchment research", Luxembourg, 19-22 Sept. 2006, Proceedings, 99-102
- Celleri R., Willems P., Buytaert W., Feyen J. (2006), 'Spatial rainfall variability in the Paute river basin from the Ecuadorian Andes', ERB2006 Conference on "Uncertainties in the 'monitoring-conceptualisation-modelling' sequence of catchment research", Luxembourg, 19-22 Sept. 2006, Proceedings, 41-44
- Bormann H., Breuer L., Croke B., Gräff T., Hubrechts L., Huisman J.A., Kite G.W., Lanini J., Leavesley G., Lindström G., Seibert J., Viney N.R., Willems P. (2006), 'Reduction of predictive uncertainty by ensemble hydrological modelling of catchment processes and land use change effects', ERB2006 Conference on 'Uncertainties in the 'monitoring-conceptualisation-modelling' sequence of catchment research', Luxembourg, 19-22 Sept. 2006, 260-263

- Timbe L., Willems P. (2006), 'Uncertainty on simulation of synthetic hydrograph events in river flood models', ERB2006 Conference on 'Uncertainties in the 'monitoring-conceptualisation-modelling' sequence of catchment research', Luxembourg, 19-22 Sept. 2006, 87-90
- Blanckaert J., Willems P. (2006), 'Statistical analysis of trends and cycles in long-term historical rainfall series at Uccle', 7th International Workshop on "Precipitation in Urban Areas", St.Moritz, Switzerland, 7-10 Dec. 2006, Proceedings 124-128
- Nyeko P. Ogiramo, Willems P. (2006), 'Development of a flood growth factor map for flood frequency estimation in the River Nile Basin using a regional procedure', Nile Development Forum 2006 of the Nile Basin Initiative, Adiss Abbaba, Ethiopia, 30 Nov. - 2 Dec. 2006
- Célleri R., Willems P., Feyen J. (2007), 'Application of a data-assimilation approach for the hydrologic modeling of basins in the Andean mountain range of South Ecuador', International Congress on "Development, Environment and Natural Resources: Multi-level and Multi-scale Sustainability", 11-13 July 2007, Cochabamba, Bolivia, Proceedings (ed. Feyen J., Aguirre L.F., Moraes M.), vol. I, 298-306
- Célleri R., Willems P., Buytaert W., Feyen J. (2007), 'Hydrology of meso-scale basins of the Southern Ecuadorian Andes', International Congress on "Development, Environment and Natural Resources: Multi-level and Multi-scale Sustainability", 11-13 July 2007, Cochabamba, Bolivia, Proceedings (ed. Feyen J., Aguirre L.F., Moraes M.), vol. I, 339-347
- Rouhani H., Willems P., Feyen J. (2007), 'Assessment of the catchment subdivision on the performance of a distributed rainfall-runoff model', International Congress on "Development, Environment and Natural Resources: Multi-level and Multi-scale Sustainability", 11-13 July 2007, Cochabamba, Bolivia, Proceedings (ed. Feyen J., Aguirre L.F., Moraes M.), vol. I, 492-499
- Timbe L., Willems P. (2007), 'Performance of 1D and 2D hydrodynamic models for floodplain modeling', International Congress on "Development, Environment and Natural Resources: Multi-level and Multi-scale Sustainability", 11-13 July 2007, Cochabamba, Bolivia, Proceedings (ed. Feyen J., Aguirre L.F., Moraes M.), vol. I, 624-632
- Vanneuville W., Van Eerdenbrugh K., Viaene P., Willems P. (2007), 'Impact of climate change on high and low discharge on Flemish rivers', 3th International Conference on "Climate and Water", Helsinki, Finland, 3-6 Sept. 2007, Proceedings (ed. Heinson M.; ISBN 978-952-11-2790-8), Finnish Environment Institute, 494-499
- Rouhani H., Gorissen D., Willems P., Feyen J. (2007), 'Improved rainfall-runoff modeling combining a semi-distributed model with artificial neural networks', SWAT Workshops and Conference, UNESCO-IHE Delft, 2-6 July 2007, Proceedings, 8 p.
- Rouhani H., Willems P., Feyen J. (2007), 'Analysis of parameter sensitivity and uncertainty of the SWAT hydrological model', International Conference on "Integrated Watershed Management: Partnerships in Science, Technology, and Planning" of the American Institute of Hydrology, Reno, Nevada (USA), 22-25 April 2007, Proceedings, 10 p.
- Shirazi R.H.S.M., Bouteligier R., Willems P. Berlamont J. (2008), 'Implementation of flushing tanks in combined sewer networks to comply with optimal self-cleansing properties', International Conference on "Stormwater and Urban Water Systems Modeling", Toronto, Canada, 21-22 February 2008
- Barjas Blanco T., Willems P., De Moor B., Berlamont J. (2008), 'Flood Prevention of the Demer using Model Predictive Control', 17th IFAC (International Federation of Automatic Control) World Congress, 6-11 July 2008, Seoul, Korea, 6 p.
- Boukhris O., Willems P., Baguis P., Roulin E. (2008), 'Rainfall and evapotranspiration climate change scenarios for impact analysis on hydrological extremes in Belgium', ECWATECH-2008 Conference (International Trade Fair and Congress "Water: Ecology and Technology"), 3-6 June 2008, Moscow, Russia; CD-Rom Conference Proceedings "Water Resource systems management under extreme conditions", SIBICO International Ltd., 8 p.
- Willems P., Barjas Blanco T., Chiang P-K., Cauwenberghs K., Berlamont J., De Moor B. (2008), 'Evaluation of river flood regulation by means of model predictive control', 4th International Symposium on "Flood Defence: Managing Flood Risk, Reliability and Vulnerability", Toronto, Ontario, Canada, May 6-8, 2008
- Goormans T., Willems P. & Jensen N.E. (2008), 'Empirical assessment of possible X-band radar installation sites, based on on-site clutter-tests'. Proc. 5th Eur. Conf. on Radar in Meteorology and

Hydrology (ERAD 2008), Helsinki, Finland, 30 June - 4 July. Published on CD-ROM: ISSN 978-951-697-676-4.

- Kandori C., Willems P. (2008), 'Impact of the two-directional interaction of sewer and river systems on the flood risk', 11th International Conference on "Urban Drainage", Edingburgh, Scotland, UK, 10 p.
- Goormans T., Engelen D., Bouteligier R., Willems P., Berlamont J. (2008), 'Design of a self-cleansing foul flow sewer system with the use of flushing devices', 11th International Conference on "Urban Drainage", Edingburgh, Scotland, UK, 10 p.
- Smolders S., Neyskens I., Willems P., Vaes G., Van Assel J. (2008), 'Bi-directional sewer-river linking through the OpenMI software', 11th International Conference on "Urban Drainage", Edingburgh, Scotland, UK, 10 p.
- Goormans T., Willems P. (2008), 'Correcting rain gauge measurements for calibration of an X-band weather radar', 11th International Conference on "Urban Drainage", Edingburgh, Scotland, UK, 10 p.
- Shirazi R.H.S.M., Bouteligier R., Willems P., Berlamont J. (2008), 'Proper location of flushing tanks in combined sewer networks for optimum effect', 11th International Conference on "Urban Drainage", Edingburgh, Scotland, UK, 10 p.
- Vaes G., Willems P., Swartenbroekx P., Kramer K., de Lange W., Kober K. (2008), 'SPI-Water: Science-Policy Interfacing in Support of the Water Framework Directive Implementation', 11th International Conference on "Urban Drainage", Edingburgh, Scotland, UK
- Willems P., Verwaest T. (2008), 'Extreme value analysis of coastal water levels, with and without convolution of the astronomic and storm surge components', 31st International Conference on Coastal Engineering (ICCE 2008), 31 August - 5 September 2008, Hamburg, Germany
- Staes J., Rubarenzya M.H., Meire P., Willems P. (2008), 'Modelling Hydrological Effects of Wetland Restoration: A differentiated view', IWA 11th International Specialized Conference on Watershed and River Basin Management, 4-5 September 2008, Budapest, Hungary
- Vansteenkiste Th., Vaes G., Willems P., de Lange W.J., Plyson J., Provost F. (2008), 'WISE-RTD Web Portal as a tool for sharing water related research information', IV International Symposium on Transboundary Waters Management, Thessaloniki, Greece, 15-18 October 2008
- Vaes G., Willems P., Swartenbroekx P., Kramer K., de Lange W.J. and Kober K. (2008), 'SPI-Water. Science-policy interfacing in support of the Water Framework Directive', IV International Symposium on Transboundary Waters Management, Thessaloniki, Greece, 15-18 October 2008
- Li Q., Chen X., Veroustraete F., Qinghan D., Bao A., Willems P., Liu T. (2008), 'Soil Moisture Content Retrieving in the Arid and Seim-Arid Region of Tarim River Basin', IEEE International Geoscience & Remote Sensing Symposium (IGARSS 2008), Boston, Massachusetts, USA, 6-11 July, 2008
- Elsaywaf M., Willems P. (2008), 'Studying evaporation uncertainty of the Bowen ratio energy budget parameters for Nasser Lake, Egypt', NBDF 2008 conference, Khartoum, 3-5 November 2008
- Nyeko P. Ogiramo, Willems P., Ntegeka V. (2008), 'The Climate Change Scenarios for Impact Assessment on Water Resources in the River Nile', Nile Basin Development Forum, 17-19 November 2008, Khartoum, Sudan
- Shirazi R.H.S.M., Willems P. Berlamont J. (2009), 'Application of flushing tanks in simple sewer networks for in-sewer sediment erosion and transport', International Conference on Stormwater and Urban Water Systems Modeling, Toronto, Canada, 19-20 February 2009
- Liu T., Willems P., Feng X.W., Li, Q., Huang, Y., Bao, An.M., Chen, X., Veroustraete F., Qinghan D. (2009), 'Hydrological modelling in support of emergency water allocation studies in the Xinjiang Province in China', 2nd International Multidisciplinary Conference on Hydrology and Ecology (HydrEco 2009), Vienna, 20-23 April 2009
- Feng, X-W., Chen Xi, Liu T., Bao A., Li L., Wang W., Huang Y. (2009), 'A multi-source remote sensing supported large scale full distributed hydrological model of the Tarim River Basin in Central Asia', 2nd International Conference on Earth Observation for Global Changes (EOGC2009), Chengdu, China, 25-29 May 2009

- Gonzalez A., Villazon M., Willems P. (2009), 'Reference evapotranspiration with limited climatic data in the Bolivian Amazon', 1st International Congress on Hydroclimatology, Cochamamba, Bolivia, 24-28 August 2009
- Villazon M., Aranibar C.R., Willems P. (2009), 'Hydrodynamics unsteady flow model applied to Pirai river for flood events estimation in Santa Cruz - Bolivia', 1st International Congress on Hydroclimatology, Cochamamba, Bolivia, 24-28 August 2009
- Huang Y., Chen X., Feng X-W., Liu T., Willems P. (2009), 'Incorporating remote sensing and geography information system in hydrological modeling of Kaidu Basin, northwest China', 2009 World Congress on Computer Science and Information Engineering (CSIE 2009), p.137, ISSN 1001-6791/ISBN 978-0-7695-3507-4
- Shirazi, R.H.S.M., Willems, P., Berlamont, J. (2009), 'Foul-sewer sediment build-up and transport modelling considering the effect of generated flush waves from flushing tanks', 8th International Conference on Urban Drainage Modelling, 7-11 September 2009, Tokyo, Japan
- Feng X-W., Chen Xi, Liu T., Bao A., Li L., Wang W., Huang Y., Willems P. (2009), 'A multi-source remote sensing supported large scale full distributed hydrological model of the Tarim River Basin in Central Asia', 2nd International Conference on Earth Observation for Global Changes (EOGC2009), Chengdu, China, 25-29 May 2009, 11 p.
- Ogiramoj, P.N., Ngirane-Katashaya, G., Willems, P. (2009), 'Using quantile analysis to evaluate GCM's performance over Katonga and Ruizi Catchments in Lake Victoria Basin', 10th WaterNet/WARFSA/GWP-SA Symposium, 28-30 October 2009, Makerere University, Entebbe, Uganda
- Willems, P., Arnbjerg-Nielsen, K., Olsson, J., Nguyen, V.T.V. (2009), 'Climate change impact assessment on urban rainfall extremes and urban drainage: methodologies en difficulties', 8th International Workshop on Precipitation in Urban Areas - Rainfall in the urban context: forecasting, risk and climate change, St.Moritz, December 2009
- Basher Md. A., Liu T., Kabir Md. A., Ntegeka V., Willems P. (2010), 'Climate change impact on the hydrological extremes in the Kaidu river basin, China', USSD (United States Society on Dams) 30th Annual Conference on "Collaborative Management of Integrated Watersheds", 12-16 April 2010, Sacramento, California, 637-651; U.S. Society on Dams, Denver, ISBN 978-1-884575-51-8
- ElSawwaf M., Willems P. (2010), 'Analysis of the climate variability on lake evaporation: for Nasser lake, south Egypt based on the Bowen ratio energy budget method', GEOMED2010: 2nd International Geography Symposium, 2-5 June 2010, Kemer-Antalya, Turkey
- Villazon M.F., Willems P. (2010), 'Filling gaps and disaccumulation of precipitation data for rainfall-runoff model', Fourth International Scientific Conference BALWOIS 2010 on "water observation and information systems for decision support", 25-29 May 2010, Ohrid, Republic of Macedonia
- Wilson G., Abbott D., De Kraker J., Pérez P., Terwisscha van Scheltinga C., Willems P. (2010), 'The lived experience of climate change': an innovative, interdisciplinary and competence-based track at Masters level using Open Educational Resources and virtual mobility', 1st International Conference on "Technology enhanced learning, quality of teaching and reforming of education (TECHEDUCA 2010), 19-21 May 2010, Athens, Greece
- Villazon M.F., Willems P. (2010), 'Evaluation of hourly disaccumulation of precipitation data for rainfall-runoff modelling', 10th International Symposium on Stochastic Hydraulics and the 5th International Conference on Water Resources and Environment Research (joint Water 2010 symposium), Quebec City, 5-7 July 2010
- Kroll, S., Thoeye, C., De Gueldre, G., Van De Steene, B., Willems, P. (2010), 'A semi automated simplification method for hydrodynamic sewer models / Une méthode de simplification semi-automatisée pour les modèles hydrodynamiques de réseaux', Novatech 2010: 7th International Conference on Sustainable technologies and strategies in urban water management, Lyon, France, 27 June - 1 July 2010
- Shrestha N. K., Goormans T., Willems P. (2010), 'Accuracy of X-band Local Area Weather Radar (LAWR) of Leuven and its First Hydrological Application for River Catchment Modelling', 9th International Conference on Hydroinformatics 2010, Tianjin, China, 7-11 September 2010
- Willems P. (2010), 'Model uncertainty analysis by variance decomposition', XXXII Italian Conference of Hydraulics and Hydraulic Constructions, Palermo, 14-17 September 2010, Special

session on: "Uncertainty assessment and validation of hydrological, hydraulic and environmental modelling"

- Willems P., Staes J., Meire P. (2010), 'Impact of climate change on river hydrology and ecology: case study for interdisciplinary policy oriented research', HydroPredict2010: 2nd International Interdisciplinary Conference on Predictions for Hydrology, Ecology, and Water Resources Management: Changes and Hazards caused by Direct Human Interventions and Climate Change, Prague, Czech Republic, 20 - 23 September 2010
- Willems P. (2010), 'The essential role of expertise associated with natural resource sectors in climate change education and its integration into collaborative Masters curriculum', EADTU Annual Conference 2010, Zermatt, 27-29 September 2010, Proceedings Strategies and business models for Lifelong Learning / Networking Conference, European Association of Distance Teaching Universities (EADTU), Heerlen, The Netherlands, 462-469, ISBN 978-90-79730-06-3
- Coninx I., Willems P., De Smet L., De Sutter R. (2010), 'Reducing tangible and intangible flood risks in a climate change context: a micro level decision support tool', International Conference 'Deltas in Times of Climate Change', 29 September 29 - 1 October 2010, Rotterdam, The Netherlands
- Ogiramo, P.N., Ngirane-Katashaya, G., Willems, P. (2011), 'Assessment of the impact of climate change on extreme precipitation and temperature events over the upper River Nile basin', AET2011 Conference, 30 January - 1 February 2011, Entebbe, Uganda
- Alam, M., Willems, P., Nolf, C., Izzi, D., Md. Aynul Kabir, Ntegeka, V. (2011), 'Assessing impacts of urbanization and climate change on urban flood risks: case study of the city of Turnhout in Belgium', International Symposium on Climate Change and Water (ISCCW 2011), 20-21 April 2011, Nanjing Hydraulic Research Institute, Nanjing, China
- Pagliero, L., Bouraoui, F., Willems, P., Diels, J. (2011), 'SWAT Modelling at Pan European Scale: the Danube Basin Pilot Study', International SWAT Conference, 15-17 June 2011, Toledo, Spain; 2011 International SWAT Conference - Book of Abstracts, University of Castilla La Mancha, Toledo, Spain, 4 p.
- Cuppens, A., Wyseure, G., Adam Fabiola, Mereles Mirtha, Rodriguez Rosalba, Willems, P., Smets, I. (2011), 'Integrated water quantity and quality management model using waste stabilisation ponds in Paraguay', International Congress: Water 2011 on "Integrated water resources management in tropical and subtropical drylands", Mekelle, Ethiopia, 19-26 September 2011
- Willems, P. (2011), 'Revision of urban drainage design rules based on extrapolation of design rainfall statistics', 12nd International Conference on Urban Drainage, Porto Alegre/Brazil, 10-15 September 2011, 8 p.
- Van Steenberg, N., Ronsyn, J., Willems, P., Van Eerdenbrugh, K. (2011), 'A data-based probabilistic approach to calculate and visualise the uncertainty of flood forecasts', International Symposium on "Urban Flood Risk Management (UFRIM 2011) - Approaches to enhance resilience of communities", 21-23 September 2011, Graz, Austria, Proceedings (Eds. Gerald Zenz, Rudolf Hornich), 177-182; ISBN 978-3-85125-173-9 (Verlag der Technischen Universität Graz)

Meeting abstracts, presented at international conferences and symposia, published or not published in proceedings or journals:

- Willems P. (1998), 'Stochastic modelling of spatial rainfall at the scale of urban catchments', 6th International Conference on Precipitation about "Predictability of rainfall at the various scales", Mauna Lani Bay, Hawaii, USA, 29 June - 1 July 1998, [abstract & poster presentation]
- Willems P. (1999), 'Probabilistic conceptual rainfall-runoff modelling', EGS'99 Conference, Den Haag, 21-24 April 1999; Geophysical Research Abstracts (ed. Richter A.K.; ISSN 1029-7006), vol. 1, no. 1-2, European Geophysical Society, Katlenburg-Lindau, Germany, [abstract & oral presentation]
- Willems P. (1999), 'A stochastic hierarchical spatial rainfall model meeting scaling properties of rainfall', EGS'99 Conference, Den Haag, 21-24 April 1999; Geophysical Research Abstracts (ed. Richter A.K.; ISSN 1029-7006), vol. 1, no. 1-4, European Geophysical Society, Katlenburg-Lindau, Germany, [abstract & oral presentation]

- Willems P., Bandy J. (1999), 'Physically-based structure identification and calibration of lumped conceptual rainfall-runoff models', EGS'99 Conference, Den Haag, 21-24 April 1999; Geophysical Research Abstracts (ed. Richter A.K.; ISSN 1029-7006), vol. 1, no. 1-2, European Geophysical Society, Katlenburg-Lindau, Germany, [abstract & oral presentation]
- Willems P., Van Looveren R., Sas M., Bogliotti C., Berlamont J. (1999), 'Evaluation of river flood modelling by the quasi two-dimensional approach', EGS'99 Conference, Den Haag, 21-24 April 1999; Geophysical Research Abstracts (ed. Richter A.K.; ISSN 1029-7006), vol. 1, no. 1-4, European Geophysical Society, Katlenburg-Lindau, Germany, [abstract & oral presentation]
- Willems P., Berlamont J. (1999), 'Stochastic spatial rainfall generator for urban drainage areas', Symposium on "Current Issues in Statistics", Leuven, 29-30 April 1999, [abstract & poster presentation]
- Willems P., Berlamont J. (1999), 'Probabilistic and conceptual modelling of rainfall-runoff', Symposium on "Current Issues in Statistics", Leuven, 29-30 April 1999, [abstract & poster presentation]
- Willems P., Berlamont J. (1999), 'Integrated and probabilistic urban drainage modelling', 6th EurAqua Scientific and Technical Review on "Urban Water Management", Lissabon, 20-21 Oct. 1999, [abstract & poster presentation]
- Abu El-Nasr A., Willems P., Timbe L., Christiaens K., Feyen J. (1999), 'Comparative analysis of the runoff-generation using lumped and distributed approaches', Symposium on "Modelling of transport processes in soils at various scales in time and space", Leuven, 24-26 Nov. 1999, Proceedings (ISSN 90-74134-76-9), [abstract]
- Radwan M., Willems P., El-Sadek A., Berlamont J. (2000), 'Surface water quantity and quality modelling: an application to Molenbeek catchment - Belgium', International Conference on "Monitoring and modelling catchment water quantity and quality", Gent, 27-29 Sept. 2000, 207-210, [abstract]
- El-Sadek A., Feyen J., Radwan M., Willems P. (2000), 'Upscaling field scale nitrate simulations to regional scale using DRAINMOD-GIS technology', International Conference on "Monitoring and modelling catchment water quantity and quality", Gent, 27-29 Sept. 2000, 229-232, [abstract]
- Willems P. (2000), 'Step-wise physically-based construction and calibration of a lumped conceptual rainfall-runoff model', International Workshop on "Catchment-scale hydrological modeling and data assimilation", Wageningen, 3-5 Sept. 2001, [abstract]
- Radwan M., Willems P., Berlamont J. (2001), 'Evaluation of hydrological modelling at the catchment scale using NAM', International Workshop on "Catchment-scale hydrological modeling and data assimilation", Wageningen, 3-5 Sept. 2001, [abstract]
- Radwan M., Willems P., El-Sadek A., Berlamont J. (2000), 'Water modelling as a tool in river basin management', EPYS meeting - 1st EurAqua/ETNET platform for Ph.D. students and young scientists, Madrid, Spain, 17-20 Oct. 2000, [abstract]
- Radwan M., Willems P., Berlamont J. (2001), 'Evaluation of hydrological modelling at the catchment scale using NAM', International Workshop on "Catchment-scale hydrological modeling and data assimilation", Wageningen, 3-5 Sept. 2001, [abstract]
- Willems P., Rombauts S. (2003), 'Step-wise calibration of lumped conceptual rainfall-runoff submodels for use at river basin scale', EGS-AGU-EUG Joint Assembly 2003, Nice, 7-11 April 2003; Geophysical Research Abstracts (ISSN 1029-7006), European Geophysical Society, [abstract & poster presentation]
- Willems P., Vaes G. (2003), 'Composite hydrographs based on long-term hydrological simulations', EGS-AGU-EUG Joint Assembly 2003, Nice, 7-11 April 2003; Geophysical Research Abstracts (ISSN 1029-7006), European Geophysical Society, [abstract & poster presentation]
- Willems P., Timbe L., Thompson S., Campling P., Barbieri M. (2003), 'FAME project: use of ESA earth observation data for flood modelling', EGS-AGU-EUG Joint Assembly 2003, Nice, 7-11 April 2003; Geophysical Research Abstracts (ISSN 1029-7006), European Geophysical Society, [abstract & poster presentation]
- Willems P., Timbe L., Thompson S., Campling P., Barbieri M., Torriano L., Vanneuville W. (2003), 'FAME: Flood risk and damage assessment using modelling and earth observation techniques',

Integrated Modelling User Group (IMUG) International Conference, Tilburg, 23-25 April 2003; [extended abstract & oral presentation]

- Willems P. (2003), 'Integrated catchment modelling by complementary use of detailed and simplified models including uncertainty analysis', Harmoni-CA Workshop on "General methodology for model supported integrated river basin management in Europe", Potsdam, 16-17 June 2003, [oral presentation]
- Willems P. (2003), 'Decomposition of model input, parameter and model-structure uncertainty in IRBM', Harmoni-CA Workshop on "Advancing project interactions in catchment modelling", Amsterdam, 16-17 Sept. 2003, [oral presentation]
- Willems P. (2004), 'Witte Nete and Dender cases within the IMA Framework', Harmoni-CA Workshop, Potsdam, 7-8 Jan. 2004, [oral presentation]
- Willems P. (2004), 'Demonstration of links between the IMA-PIP general methodology and the application of models/tools in tributaries of the Scheldt PRB', Harmoni-CA – 2nd CatchMod Technical Workshop on "Integrating tools and toolboxes", Copenhagen, 16-19 Nov. 2004, [oral presentation]
- Rubarenzya M.H., Willems P., Berlamont J. (2004), 'Modelling the effects of rewetting on hydrological extremes', New Zealand Hydrological Society conference, Queenstown, Nov. 2004, [abstract & oral presentation]
- Rubarenzya M.H., Willems P., Berlamont J., Feyen J. (2005), 'Hydrological modelling of the effects of river valley rewetting on extreme events in Belgium', 15th Annual AEHS Meeting and West Coast Conference on "Soils, sediments and water", San Diego, 14-17 March 2005, [abstract & oral presentation]; also published in Remediation Weekly - Science & News, vol. 3, no. 7, 13 February 2006
- Willems P. (2005), 'Bias analysis on the tail properties of flood frequency distributions', EGU05 Conference (General Assembly of the European Geosciences Union), Vienna, 24-29 April 2005; Geophysical Research Abstracts, European Geosciences Union, vol. 7, 10299, [abstract & oral presentation]
- Willems P. (2005), 'Spatial rainfall simulation for hydrological modelling', EGU05 Conference (General Assembly of the European Geosciences Union), Vienna, 24-29 April 2005; Geophysical Research Abstracts, European Geosciences Union, vol. 7, 10278, [abstract & poster presentation]
- Willems P. (2005), 'River hydraulic influences on flood frequency analysis', Workshop on "Risk analysis and extreme values", University of Paris VI, 27-29 June 2005, [abstract & oral presentation]
- Breuer L., Huisman J.A., Willems P., Bormann H., Bronstert A., Croke B., Frede H.-G., Gräff T., Hubrechts L., Jakeman T., Kite G., Lanini J., Leavesley G., Lettenmaier D., Lindström G., Seibert J., Sivapalan M., Viney N. (2006), 'Multi-model ensemble predictions of hydrological fluxes caused by a change in land use', EGU06 Conference (General Assembly of the European Geosciences Union), Vienna, 2-7 April 2006, [abstract]
- de Lange W., Arnold G., Willems P., Balabanis P., Quevauviller Ph. (2006), 'WISE-RTD Webportal – A gate to scientific information for WFD implementers and water managers', Water Status Monitoring under the WFD (Water Framework Directive) Conference, 12-14 March 2007, Lille, France, [abstract]
- de Lange W., Arnold G., Willems P., Provost F., Hatterman F., Plyson J., Mestdagh M., Swartenbroekx P., Balabanis P., Quevauviller Ph. (2006), 'WISE-RTD Webportal – A gate to scientific information for WFD implementers and water managers', European Conference on "Sustainable neighbourhood: from Lisbon to Leipzig through research (L2L)", Leipzig, Germany, 8-10 May 2007, [abstract]
- Willems P., Boukhris O. (2007), 'Climate change impact on hydrological extremes along rivers in Belgium', EGU General Assembly 2007, Vienna, 15-20 April 2007, ref. EGU2007-A-10675, HS41-1FR4P-0274, [abstract & poster presentation]
- Goormans T., Willems P. (2008), 'Taking rain gauge errors into account in the calibration of a short range X-band weather radar', International Symposium on Weather Radar and Hydrology (WRaH2008), 10-12 March 2008, Grenoble, France, [poster + abstract]

- Martens F., Willems P., Richard J., Hillewaere J., Franken P., Mušič B., De Laet V. (2008), 'Bridging the gaps! Hydraulic modeling of the water network of Sagalassos', International Symposium "Holistic archeology – prehistory and beyond", Leuven, 2-4 June 2008, [poster + abstract]
- Ntegeka V., Willems P. (2009), 'Detecting temporal extreme clusters in long-term precipitation records', EGU General Assembly 2009, Vienna, 19-24 April 2009, EGU2009 Sessions CL54/NP4.5 [abstract & oral presentation]
- Paridaens K., Plancke Y., Schep I., Schrijver M., Willems P. (2009), 'Comparison under field conditions of different measurement techniques for monitoring sediment transport in the Scheldt estuary', SedNet conference, Hamburg, Germany, 6-8 October 2009 [abstract and poster]
- Ogiramo P.N., Ntegeka V., Willems P. (2009), 'GCM based perturbation analysis over Katonga and Ruizi Catchments in Lake Victoria basin', International Symposium 'Developing Countries facing Global Warming: a Post-Kyoto Assessment', Brussels, 12 - 13 June 2009 [abstract and poster]
- Vanuytrecht E., Geerts S., Willems P., Raes D. (2009), 'AquaCrop (FAO crop water productivity model) as a tool to assess the consequences of climate change on crop development and the soil water balance', International Symposium 'Developing Countries facing Global Warming: a Post-Kyoto Assessment', Brussels, 12 - 13 June 2009 [abstract and poster]
- Willems P., Vrac M. (2010), 'Statistical downscaling of rainfall and small-scale hydrological impact investigations of climate change', Geophysical Research Abstracts, Vol. 12, EGU2010-9455, 2010: EGU General Assembly 2010, 2-7 May 2010, Vienna, [abstract]
- Willems P., Yiou P. (2010), 'Multidecadal oscillations in rainfall extremes', Geophysical Research Abstracts, Vol. 12, EGU2010-10270, 2010: EGU General Assembly 2010, 2-7 May 2010, Vienna, [abstract]
- Willems P. (2010), 'Parsimonious rainfall-runoff model construction supported by time series processing and validation of hydrological extremes', Geophysical Research Abstracts, Vol. 12, EGU2010-10338, 2010: EGU General Assembly 2010, 2-7 May 2010, Vienna, [abstract and poster]
- Willems P., Ntegeka V. (2010), 'Multidecadal clustering of rainfall extremes over northwestern Europe during the past century', IPC10 International Precipitation Conference, Coimbra, Portugal, 23-25 June 2010, [abstract]
- Taye M.T., Willems P. (2010), 'Low flow extreme value analysis for the river Nile basin', WCRP-UNESCO Workshop on metrics and methodologies of estimation of extreme climate events, UNESCO Headquarters, Paris, 27-29 September 2010, [abstract and poster]
- Willems P., Deckers P., De Maeyer Ph., De Sutter R., Vanneuille W., Brouwers J., Peeters B. (2010), 'Environmental Outlook towards 2030 for the Flanders region of Belgium: possible climate changes and their consequences for the water systems', International Conference 'Deltas in Times of Climate Change', 29 September 29 – 1 October 2010, Rotterdam, The Netherlands, [abstract and poster]
- Willems P., Ntegeka V., Ogiramo P.N., Taye M.T. (2010), 'Effects of climate change on hydrological extremes in the Nile basin', Mini-symposium on Global Change Modeling for the Water Resources of the Nile, 6 October 2010, UNESCO-IHE Delft, [abstract]
- Pineda L., Ntegeka V., Willems P. (2010), 'Rainfall variability in Catamayo-Chira basin, Southern Ecuador – Northern Peru and its relation with ENSO', International Workshop on ENSO, Decadal Variability and Climate Change in South America: "Trends, Teleconnections and Potential Impacts", Guayaquil, Ecuador, 12-14 October 2010, [abstract and poster]
- Willems P. (2010), 'Adaptation to climatic change of urban drainage in Europe', International conference "Adaptation to the changing climate: time to intensify efforts", Brussels, 23-24 November 2010, [abstract and poster]
- Vansteenkiste Th., Vanneuille W., Ntegeka V., Willems P., Holvoet K. (2010), 'Hydrological impact analysis of climate change and urban expansion: a base for adaptation strategies (cases in Flanders, Belgium)', International conference "Adaptation to the changing climate: time to intensify efforts", Brussels, 23-24 November 2010, [abstract and poster]
- Brouwers J., Peeters B., Willems P., Deckers P., De Maeyer Ph., De Sutter R. and Vanneuille W. (2010), 'Flanders Environment Outlook 2030: Climate change and impacts on water systems till 2100', International Conference "Adaptation to the changing climate: time to intensify efforts", Brussels, 23-24 November 2010, [abstract and poster]

- Taye, M.T., Willems, P. (2010), 'Relation between hydro-climatic extremes and atmospheric circulation patterns in the Nile basin', COST Action 733 - Harmonisation and application of weather type information classifications in Europe, Vienna, 22-24 November 2010, [abstract]
- Ntegeka V., Willems P., Monbaliu J. (2011), 'Incorporating the correlation between upstream inland, downstream coastal and surface boundary conditions into climate scenarios for flood impact analysis along the river Scheldt', Geophysical Research Abstracts, EGU2011-6554: EGU General Assembly 2011, Vienna, April 2011, [abstract]
- Villazon M., Chiang P-K., Willems P. (2011), 'Model predictive real-time flood control', International Symposium on Innovations in Flood Forecasting Systems, Flanders Hydraulics Research, Antwerp, 16-17 March 2011, [abstract]
- Villazon M., Willems P. (2011), 'Implementation of a conceptual model (reduced computational time) for the Pirai basin in Bolivia', IVth Scientific Meeting on "Hydrology and Geodynamics of the basins of South America", Environmental Research Observatory (ORE) HYBAM, Lima, Peru, 6-9 September 2011
- Willems P., Vansteenkiste Th. (2011), 'Klimaatscenario's voor Vlaanderen en invloed op waterhuishouding', Studiedag Klimaatadaptatie, Interreg IVB NWE project "Future Cities", west-vlaamse intercommunale, Brugge, 13 September 2011
- Willems P. (2011), 'Adaptation to climatic change of urban drainage in Europe', International conference "Adaptation to the changing climate: time to intensify efforts", BLAST project conference "Closing the gap", Ostend, 22 September 2011 [poster]
- Willems P. (2010), 'Climate change impacts on hydrological extremes (floods, low flows) along catchments in the Scheldt river basin', International conference "Adaptation to the changing climate: time to intensify efforts", BLAST project conference "Closing the gap", Ostend, 22 September 2011 [poster]
- Ntegeka V., Willems P., Monbaliu J. (2011), 'Incorporating the correlation between upstream inland, downstream coastal and surface boundary conditions into climate scenarios for flood impact analysis along the river Scheldt', International conference "Adaptation to the changing climate: time to intensify efforts", BLAST project conference "Closing the gap", Ostend, 22 September 2011 [poster]
- Van Steenberghe, N., Ronsyn, J., Willems, P., Van Eerdenbrugh, K. (2011), 'A data-based probabilistic approach to calculate and visualise the uncertainty of flood forecasts', International Symposium on "Urban Flood Risk Management (UFRIM 2011) - Approaches to enhance resilience of communities", 21-23 September 2011, Graz, Austria [poster]
- Willems P. (2011), 'Projected changes in Hydrology and Vegetation', NOSCCA (North Sea Region Climate Change Assessment) meeting, Amsterdam, 5 October 2011
- Goormans, T., Decloedt, L-C., Willems, P., Van Assel, J. (2011), 'Analysis of local weather radar data in support of sewer system modelling: Case of X-band radar at Leuven, Belgium', International Workshop on X-Band Weather Radar, 14-16 November 2011, Delft, Netherlands [abstract & poster]
- Willems, P. (2011), 'Fine scale rainfall estimation and forecasting: WP2 RAINGAIN Interreg project', RainGain Kick-off workshop, 17-18 November 2011, Ecole des Ponts ParisTech, Paris, France
- Taye M.T., Willems P. (2012), 'Representative QDF predictions of the upper Blue Nile Basin from short term data', 5th International Perspective on Water Resources & the Environment Conference (IPWE 2012), January 4-7, 2012, Marrakech, Morocco; CD-Rom Proceedings, ASCE - Environmental & Water Resources Institute (EWRI), [abstract accepted; oral presentation]

Papers at other conferences and symposia, published in full in proceedings:

- Willems P. (1995), 'Controle snelheids- en waterhoogtemeting van DETEC-3510 Surveyloggers', Studiedag 'Meetcampagnes voor data-verificatie, kalibratie van hydrodynamische modellen', Leuven, 15 Febr. 1995

- Gonella M., Willems P., Huysentruyt H., Berlamont J., Adams R., Bogliotti C. (1996), 'La gestione dell'inquinamento del bacino del fiume Dender (Belgio) con l'utilizzo di un modello di qualità dell'acqua', Conference proceedings 'XXV Convegno di Idraulica e Costruzioni Idrauliche', Turijn, Italië, Sept. 1996
- Campling P., Thompson S., Timbe L., Willems P., Barbieri M., 'Flood Risk and damage assessment using GIS, modelling and earth observation', Flemish Association For Geographic Information Systems (FLAGIS), Studiedag over 'Waterbeheer en GIS', 21 Nov. 2002
- Willems P. (2003), 'Potentieel overstromingsgevaar', Symposium "Overstromingen verZEKERd" van de Kempische Verzekeringkring, Geel, 25 April 2003, Proceedings 16-27
- Willems P. (2008), 'Waargenomen veranderingen in het neerslagklimaat', PAO cursus TUDelft "Klimaatverandering: Wateroverlast en riolering", Delft, 18 March 2008, tekst in cursusbundel
- Willems P. (2008), 'Vertaling neerslagklimaat naar ontwerpbelastingen', PAO cursus TUDelft "Klimaatverandering: Wateroverlast en riolering", Delft, 18 March 2008, tekst in cursusbundel
- Vanuytrecht E., Geerts S., Willems P., Raes D. (2009), 'Effects of elevated atmospheric CO2 concentrations on crop development and soil water balance. A review and implementation in the water productivity model AquaCrop', In: Smagghe, G., Boeckx, P., Bossier, P., Steurbaut, W., Van Damme, E.J.M., Verhoest, N. (Pub.). Communications of Agricultural and Applied Biological Sciences 74(4), p 83-88. Ghent University & Proceedings of the PhD symposium on Applied Biological Sciences; 15th PhD Symposium on Applied Biological Sciences, Leuven, Belgium, November 2009.

Meeting abstracts, presented at other conferences and symposia, published or not published in proceedings:

- Willems P. (1995), 'Emission calculations: the Flemish way', Seminarie 'Rainfall statistics and Integrated Urban Drainage', Technical University of Denmark, Lyngby, 6 March 1995
- Willems P. (1995), 'A first proposal of concept of an integrated stochastic model of sewer system, treatment plant and receiving water', Seminarie 'Rainfall statistics and Integrated Urban Drainage', Technical University of Denmark, Lyngby, 6 March 1995
- Willems P. (1995), 'Modellering van de invloed van rioleringsvuilvrachten op het ontvangende oppervlaktewater', Seminarie, VITO, 4 May 1995
- Willems P. (1997), 'Conceptuele en probabilistische modellering van rioleringsemissies en -immissies', Dag van de Hydraulica, Arenbergkasteel Leuven, 22 Okt. 1997
- Willems P. (1998), 'Probabilistic modelling of sewer system emissions and immissions', TAG-vergadering van de N.V. Aquafin, Leuven, 18 May 1998
- Willems P. & Berlamont J. (2000), 'Hydrologische en hydrodynamische modellering toepasselijk voor integraal waterloopbeheer', studiedag 'Naar een geïntegreerd water- en waterloopbeheer: Technieken, methoden, ervaringen', KVIV - Technologisch Instituut, Genootschap Civiele Techniek, Ingenieurshuis, Antwerpen, 30 May 2000
- Willems P. (2001), 'Hydrological applications of extreme value analysis', Workshop of Flood Frequency Analysis & Drought and Low Flow Frequency Analysis Components of the Friend/FIT Nile Basin project, Cairo, 14 Nov. 2001
- Van Dyck J. & Willems P. (2001), 'Flood Loss Assessment Tool 2.0: benaderingswijze en methodologie', CATNAT Symposium 'Overstromingen en aardbevingen in België', St. Paul Re & Aon, Plaza Hotel Brussel, 10 Oct. 2001
- Willems P. (2002), 'Flood frequency analysis', Workshop of Friend/FIT Nile Basin project, Dar-es-Salaam, 20-25 May 2002
- Abu El-Nasr A. & Willems P. (2002), 'Splitting of the total discharge in its components', Doctoraatsseminarie, Departement Landbeheer, Faculteit der Landbouwkundige en Toegepaste Biologische Wetenschappen K.U.Leuven, 4 Sept. 2002
- Guillou A., Willems P. & Beirlant J., 'Introduction de concepts probabilistes pour décrire des phénomènes extrêmes', Workshop 'Rencontre à mi-parcours des équipes du programme de

recherche « Risque Inondation » (RIO 2), Ministère de l'Ecologie et du Développement Durable, Paris, 31 March 2003

- Willems P. (2003), 'Hydrological extreme value analysis', Workshop of Flood Frequency Analysis Component of the Friend/FIT Nile Basin project, Cairo/Giza, 1-4 April 2003
- Willems P. (2003), 'Inundation risk in Belgium: evolution and description of Flood Risk Zones', 'Flood Seminar' workshop voor (her)verzekeringsmaatschappijen, Aon Re Belgium, Brussel, 22 May 2003 & 4 juni 2003
- Willems P. (2003), 'New developments in low flow analysis', Synthesis and Planning Workshop of the Drought and Low Flow Analysis Component of the Friend/FIT Nile Basin project, Nairobi, 26 Aug. 2003
- Willems P. (2003), 'Review country reports FRIEND/Nile flood frequency analysis', Workshop of Flood Frequency Analysis Component of the Friend/FIT Nile Basin project, Sharm El Sheikh, 29 Nov. 2003
- Willems P. (2003), 'Methodology integrated river catchment modelling', 1st Workshop NATO Collaborative Linkage Grant project on 'Mathematical modelling for integrated surface water management along the river Nile', Leuven, 15-19 Dec. 2003
- Willems P. (2004), 'Extreme value analysis and rainfall-runoff modelling river Dender basin', Doctoraatsseminarie Hydraulica K.U.Leuven, 13 Jan. 2004
- Willems P. (2004), 'Hydrologie en verstening', Symposium 'Klankbord verstening', Leuven, 27 May 2004
- Willems P. (2004), 'Review methodologies for low flow analysis + Examples for 2 Kenyan catchments', Workshop of Drought and Low Flow Analysis Component of the Friend/FIT Nile Basin project, Alexandria, 18 June 2004
- Willems P. (2004), 'Review country reports FRIEND/Nile flood frequency analysis', Workshop of Flood Frequency Analysis Component of the Friend/FIT Nile Basin project, Alexandria, 22 June 2004
- Willems P. (2004), 'Overstromingskans – Afbakening van risicogebieden – Watertoets', Vakbeurs Riolering, Brabantse Leuven, 8 Oct. 2004
- Willems P. (2004), 'Methodology for the calculation and application of low flow QDF relationships', Workshop of Drought and Low Flow Analysis Component of the Friend/FIT Nile Basin project, Nairobi, 24 Nov. 2004
- Willems P. (2004), 'Regionalisation analysis flood frequency analysis', Workshop of Flood Frequency Analysis Component of the Friend/FIT Nile Basin project, Nairobi, 27 Nov. 2004
- Vaes G., Willems P. (2006), 'Neerslaginvoer voor hydrologische en hydraulische modellen', CIW studiedag "Vlaamse innovaties in watersysteemkennis: thema oppervlaktewaterkwantiteit", Leuven, 12 Oct. 2006
- Barjas-Blanco T., Willems P., Berlamont J., De Moor B., Cauwenberghs K., Rombauts S., Raymaekers F. (2006), 'Real-time sturing van wachtbekkens', CIW studiedag "Vlaamse innovaties in watersysteemkennis: thema oppervlaktewaterkwantiteit", Leuven, 12 Oct. 2006
- Boukhris O., Willems P., Blanckaert J., Berlamont J., Baguis P., Roulin E., Viaene P., Van Eerdenbrugh K. (2006), 'Impact van klimaatverandering op hydrologische extremen langs Vlaamse waterlopen', CIW studiedag "Vlaamse innovaties in watersysteemkennis: thema oppervlaktewaterkwantiteit", Leuven, 12 Oct. 2006
- Vaes G., Willems P. (2006), 'Filtertechniek voor het kwantificeren van parasitaire debieten in riolen', CIW studiedag "Recente ontwikkelingen in het grondwateronderzoek in Vlaanderen", Gent, 8 Febr. 2007
- Vaes G., Willems P., Bouteligier R., Berlamont J. (2007). 'Hydraulische modellering van de interactie tussen riool- en rivierstelsels', CIW studiedag "Modellen voor integraal waterbeheer in Vlaanderen", 3 May 2007, Vrije Universiteit Brussel

- Ronsijn J., Willems P., Van Eerdenbrugh K. (2007), 'Kwaliteitscontrole voorspellingsmodellen', CIW studiedag "Modellen voor integraal waterbeheer in Vlaanderen", 3 May 2007, Vrije Universiteit Brussel
- Timbe L., Willems P. (2007), 'Uncertainties in flood simulation models', CIW studiedag "Modellen voor integraal waterbeheer in Vlaanderen", 3 May 2007, Vrije Universiteit Brussel
- Willems P. (2007), 'Research overview Rivers and urban drainage', Seminar at Universidad Mayor de San Simón, Cochabamba, Bolivia, 10 July 2007
- Willems P. (2007), 'Review and discussions on stationarity and trend testing', Workshop of Stochastic Modelling Component Friend/Nile project of UNESCO and Flanders in Trust Fund, Dar-es-Salaam, Tanzania, 6 Aug. 2007
- Willems P. (2007), 'Niets is zeker! Hoe omgaan met onzekerheden in modellen', CIW Congres Watersysteemkennis, Antwerpen, 6-7 Dec. 2007
- Willems P. (2008), 'Multidecadal oscillations in rainfall extremes and global warming impact on hydrological extremes in Belgium', Seminar Université Paris VI, 20 March 2008
- Willems P. (2008), 'Joint Sino-Belgian project on the support of integrated water resources management by hydrological modeling and the remote sensing of arid and semi-arid ecosystems in the Tarim basin', Sino-Belgian seminar on teledetection, organized by the Chinese Ministry of Science and Technology (MOST) and Chinese National Remote Sensing Center, Beijing, 25 April 2008
- Verbist B., Harto Widodo R., Willems P., Poesen J., Deckers J. (2008), 'Deforestation or climate change: What is changing the flow regime of the Way Besai in Sumberjaya, Lampung, Sumatra?', Symposium Aardse Zaken, K.U.Leuven Departement Aard- en Omgevingswetenschappen, Leuven, 22 May 2008
- Willems P. (2008), 'Outline of the WISE-RTD mapping concept', SPI-Water Danube workshop, Munich, 23 April 2008
- Willems P., Ducharne A., Viennot P., Beguis P., Verwaest T. (2008), 'Impact van klimaatverandering op hydrologische en hydraulische extremen in de Schelde- en Seine-rivierbekkens en langs de Noordzeekust / Impact du changement climatique sur les extrêmes hydrologiques et hydrauliques dans les bassins de l'Escaut et de la Seine, et sur le littoral de la Mer du Nord', Congres "Water en Klimaatverandering / Eau et Changement Climatique", 14-15 oktober 2008, U.Antwerpen, Antwerpen.
- Willems P. (2008), 'Background of the WISE-RTD Web Portal', Workshop Final SPI-Water Conference, Brussel, 30 oktober 2008
- Willems P. (2008), 'Summary of the SPI-Water Final Conference workshops', Final SPI-Water Conference, Brussel, 31 oktober 2008
- Willems P. (2008), 'Regionale hydrologische extreme-waarden-analyse voor het Nijlbekken / Analyse statistique régionale des valeurs extrêmes hydrologiques dans le bassin du Nil', Koninklijke Academie voor Overzeese Wetenschappen, Brussel, 18 december 2008
- Willems P. (2009), 'Invloed van klimaatverandering op hydrologische extremen in Vlaanderen', LSUE workshop, Leuven, 19 juni 2009
- Willems P. (2009), 'Hydrologische modellering: De Vlaamse aanpak', Symposium Nederlandse Hydrologische Vereniging (NHV), Doorn (Nederland), 15 oktober 2009
- Goormans T., Willems P. (2009), 'Lokale radar voor rioleringstoepassingen', ARCADIS Landelijke Meetdag 2009, Arnhem (Nederland), 15 oktober 2009
- Willems P. (2009), 'Invloed van de klimaatverandering op de waterhuishouding in Vlaanderen', ARGUS/VLEVA-SYMPOSIUM "Het Belgisch EU- voorzitterschap: Het klimaat verandert?", 26 oktober 2009, KBC Brussel: lezing, VLEVA: VlaamsEuropeesVerbindingsAgentschap
- Willems P., Ntegeka V., Baguis P., Roulin E. (2010), 'Climate change impacts on hydrological extremes along rivers and urban drainage systems in Belgium', Seminarie Belgisch Nationaal Committee voor Geodesie en Geofysica (BNCGG), Leuven, 29 april 2010

- Willems P., Ntegeka V., Baguis P., Roulin E., Vansteenkiste Th., Holvoet K. (2010), 'Climate change impacts on hydrological extremes (floods, low flows) along rivers in the Scheldt and Meuse basins in Belgium', 4th Belgian Geography Days, Leuven, 22-23 October 2010
- Vansteenkiste Th., Holvoet K., Willems P., De Smedt F., Tavakoli M., Phiri L., Fantilanan J. (2010), 'Assessing the impact of climate change on catchment hydrology using the distributed models MIKE SHE and WetSpa', 4th Belgian Geography Days, Leuven, 22-23 October 2010
- Willems P. (2010), 'Klimaatveranderingen in België', Workshop 'Adaptatie aan klimaatverandering: leven met een toekomst', Vlaamse Overheid - Departement Leefmilieu, Natuur en Energie, Brussel, 28 juni 2010
- Willems P. (2010), 'Invloed van klimaatverandering op stedelijke hydrologie en adaptatienoden', Studiedag lokaal waterbeleid - werkgroep water en klimaat in balans, VVGS, Expo Antwerpen, 28 september 2010
- Willems P. (2010), 'Invloed van klimaatverandering op hydrologische extremen in het Vlaamse binnenland', Symposium Nederlandse Hydrologische Vereniging (NHV), Leuven, 25 november 2010
- Willems P., Ntegeka V., Baguis P., Roulin E. (2011), 'Klimaatsscenario's voor hydrologische en ecologische impactanalyse in België', 8e Waterforum, Brussel, februari 2011
- Brouwers J., Peeters B., Willems P., Deckers P., De Maeyer Ph., De Sutter R. and Vanneuville W. (2011), 'Flanders Environment Outlook 2030: Climate change and impacts on water systems till 2100', 8ste Waterforum "Adaptatie van het Vlaamse watersysteem aan klimaatverandering en bevolkingstoename: Welke kennis is er (nodig)?", Brussel, 11 February 2011, [poster]
- Vansteenkiste Th., Boukhris O., Deckers P., Holvoet K., Ntegeka V., Willems P., Vanneuville W., (2011), 'Impact van klimaatverandering op hydrologische extremen en de gevolgen voor overstromingen en watertekorten in Vlaanderen', 8ste Waterforum "Adaptatie van het Vlaamse watersysteem aan klimaatverandering en bevolkingstoename: Welke kennis is er (nodig)?", Brussel, 11 February 2011
- Vansteenkiste Th., Tavakoli M., Holvoet K., Ntegeka V., Willems P., De Smedt F., Vanneuville W., Pereira F. (2011), 'Effect van klimaatwijziging op de bekkenhydrologie en globale waterbeschikbaarheid - gevalstudie voor Vlaanderen', 8ste Waterforum "Adaptatie van het Vlaamse watersysteem aan klimaatverandering en bevolkingstoename: Welke kennis is er (nodig)?", Brussel, 11 February 2011, [poster]
- Berlamont J., Willems P. (2011), 'Wateroverlast in Vlaanderen. Oorzaken? Wat kunnen we eraan doen?', Hoorzitting Vlaams Parlement, 20 januari 2011
- Willems P. (2011), 'Impact van de klimaatverandering op hydrologische extremen in Vlaanderen', lecture series "Water in the world", Leerstoel Integraal Waterbeheer Universiteit Antwerpen i.s.m. Argus, Antwerpen, 8 februari 2011
- Willems P. (2011), 'Climate change impact on hydrological extremes along rivers and urban drainage systems in Belgium', VUB CROSSTALKS: Technology Day: Bridge over Troubled Waters - A border-crossing perspective on water technologies in Brussels and beyond, 25 March 2011, Royal Flemish Academy of Belgium for Sciences and Arts (KVAB), Brussel
- Willems P. (2011), 'Quantification of trends and oscillations in hydroclimatic extremes', Workshop of Stochastic Modelling Component of the Friend/FIT Nile Basin project, Cairo, 12 October 2011
- Vissers S., Wolfs V., Willems P. (2011), 'Adaptieve maatregelen tegen overstromingen in het Denderbekken', ie-prijzen 2011, 1 December 2011, Antwerpen
- Willems P. (2012), 'Wateroverlast en verdroging in Vlaanderen: heden en toekomst', Studiemiddag BELEID EN OVERLEG (voor alle Vlaamse schepenen van openbare werken), Vlaams Parlement, 9 februari 2012
- Willems P. (2012), 'Overstromingen in Vlaanderen: een potentieel gevaar?', tweejaarlijks Symposium Medisch Rampenmanagement, Rode Kruis West-Vlaanderen, 27 October 2012, Blankenberge

Master and PhD theses:

- Pauwels G. & Willems P. (1993), 'Tunnelboorwijzen en risico-analyse op tunnelsecties', Master thesis Civil Engineering K.U.Leuven, May 1993 (grote onderscheiding)
- Willems P. (2000), 'Probabilistic immission modelling of receiving surface waters', PhD thesis, Faculty of Engineering K.U.Leuven, Oct. 2000 (grootste onderscheiding)

Reports of research projects:

Flemish region guidelines for water authorities:

- Willems P., Qvick A., Vaes G., Berlamont J., Christiaens K. & Feyen J. (2000), 'Algemene methodologie voor het modelleren van de waterafvoer in bevaarbare waterlopen in Vlaanderen', Richtlijn voor AWZ - Waterbouwkundig Laboratorium, April 2000, 157p.
- Willems P., Bandy J. et al. (2002), 'Methodologie ter hydrologische modellering van Vlaamse hydrografische (sub)bekkens en de afleiding van maatgevende hydrogrammen', Laboratorium voor Hydraulica K.U.Leuven, Richtlijn voor AMINAL - Afdeling Water, May 2002, 309 p.
- Willems P., Vaes G., Delbeke L., Qvick A., Popa D., De Lannoy G., Verhoest N., De Troch F. & Dauwe B. (2002), 'Een ruimtelijk neerslagmodel voor Vlaanderen', Laboratorium voor Hydraulica K.U.Leuven en Laboratorium voor Hydrologie en Waterbeheer U.Gent i.s.m. KMI en IMDC, Richtlijn voor het Ministerie an de Vlaamse Gemeenschap, Administratie Wetenschap en Innovatie, Oct. 2002, 340 p.
- Vaes G. & Willems P. (2002), 'Composiethydrogrammen voor de berekening van overstromingsvlaktes met eendimensionale hydraulische modellen', Laboratorium voor Hydraulica K.U.Leuven, Richtlijn voor AWZ - Waterbouwkundig Laboratorium, March 2002, 93 p.
- Boukhris O., Willems P. & Berlamont J. (2006), 'Methode voor het inrekenen van de klimaatverandering in de composiethydrogrammethode - Algemeen rapport', Laboratorium voor Hydraulica K.U.Leuven, Rapport MOD 706/10-1 voor de Vlaamse Overheid - Afdeling Waterbouwkundig Laboratorium, Dec. 2006, 74 p.
- Willems P. (2009), 'Actualisatie en extrapolatie van hydrologische parameters in de nieuwe Code van Goede Praktijk voor het Ontwerp van Rioleringsystemen', eindrapport voor VMM-Afdeling Operationeel Waterbeheer, september 2009, 79 p.
- Willems P. (2011), 'Evaluatie en actualisatie van de IDF-neerslagstatistieken te Ukkel', Aanvulling bij de studie "Actualisatie en extrapolatie van hydrologische parameters in de nieuwe Code van Goede Praktijk voor het Ontwerp van Rioleringsystemen (K.U.Leuven voor VMM, sept. 2009)", oktober 2011, 14 p.

Other:

- Huysentruyt H., Willems P., Gonella M. & Berlamont J. (1995), 'Studie van de emissie/immissie relaties in het Denderbekken, gebruikmakend van een numerieke simulatie met het model MIKE11', Rapport voor de Vlaamse Milieumaatschappij, July 1995, 69p.
- Vaes G., Willems P. & Berlamont J. (2002), 'Composietbuien voor grote buiduren', Rapport voor AMINAL - Afdeling Water, June 1998, 6 p.
- Van Looveren R., Willems P., et al. (1998), 'Oppervlaktewaterkwantiteitsmodellering van het stroomgebied van de Dijle stroomopwaarts van Leuven met het software-model MIKE11, en vergelijking met de resultaten bekomen met ISIS', Rapport voor AMINAL - Afdeling Water, in samenwerking met TECHNUM / IMDC en HYDRODATA I.C., Oct. 1998, 214 p.
- Willems P., Timbe L. & Popa D. (2002), 'Mike11 model Dender, versie april 2002', Laboratorium voor Hydraulica K.U.Leuven, Rapport voor AWZ - Waterbouwkundig Laboratorium, April 2002, 131 p.
- Willems P., Timbe L. & Campling P. (2002), 'Dwarssectieverwerking en DTM-correctie voor quasi 2D hydraulische overstromingsmodellering: methodologie, toepassing Mike11-Dendermodel, en nauwkeurighedsanalyse', Laboratorium voor Hydraulica K.U.Leuven, Rapport voor AWZ - Waterbouwkundig Laboratorium, March 2002, 78 p.
- Vaes G. & Willems P. (2002), 'Het gebruik van bakmodellen voor de voorspelling van de invoer in riviermodellen ter plaatse van riooloverstorten met het oog op een geïntegreerde modellering',

Laboratorium voor Hydraulica K.U.Leuven, Rapport voor AMINAL – Afdeling Water, Febr. 2002, 77 p. + bijlagen

- Willems P. & Berlamont J. (2002), 'Doorlichting van de HIC-methodologie voor de opmaak en het gebruik van Q-H verbanden', Laboratorium voor Hydraulica K.U.Leuven, Rapport voor AWZ – Waterbouwkundig Laboratorium, Sept. 2002, 48 p.
- Willems P. & Timbe L. (2002), 'Flood risk and damage assessment using modelling and earth observation techniques (FAME) – Dender case report', Subreport 'Quasi 2D flood modelling: use of SAR information for model calibration and validation' for the European Space Agency ESA, Hydraulics Laboratory K.U.Leuven, Sept. 2002, 72 p.
- Van Looveren R. & Willems P. (2003), 'Opstellen van een methodologie voor de opmaak van laagwaterscenario's voor de bevaarbare waterwegen in Vlaanderen', IMDC & Laboratorium voor Hydraulica K.U.Leuven, Deelrapport 'Numerieke implementatie' voor AWZ – Waterbouwkundig Laboratorium, Jan. 2003, 39 p.
- Willems P., Vaes G. & Berlamont J. (2003), 'Berekening overstromingskans nieuwbouw Interbrew-Leuven', Laboratorium voor Hydraulica K.U.Leuven, Rapport voor Interbrew, March 2003, 45 p.
- Willems P., Thompson S. & Barbieri M. (2003), 'Flood risk and damage assessment using modelling and earth observation techniques (FAME)', Hydraulics Laboratory & SADL K.U.Leuven, Reports for the European Space Agency ESA, July 2003, Subreports 'Final Report', July 2003, 46 p., 'Service Sustainability Assessment Report', July 2003, 16 p., 'Service Quality Assessment Report', 19 p., 'Demer and Entella service cases report', April 2003, 160 p., 'System specification description', April 2003, 30 p.
- Castelletti A., Gandolfi C., Guipponi C., Hattermann F.F., Heuvelink G.B.M., Kaden S., Messner F., Muhar S., Pahl-Wostl C., Schoolten H., Soncini Sessa R., Stalnacke P., van Delden H., Wenzel V. & Willems P. (2003), 'General Methodology for Participatory Model-Supported Integrated River Basin Management', E.C. Harmoni-CA 'General Methodology and Guidance Document', Sept. 2003, 42 p.
- Rombauts S. & Willems P. (2003), 'Inventarisatie, opmaak van numerieke hydrologische modellen en opstellen van compositiehydrogrammen voor het Denderbekken', Laboratorium voor Hydraulica K.U.Leuven, Rapporten voor AWZ – Waterbouwkundig Laboratorium, April 2004, 620 p.
- Willems E., Dierckx J., Gijsbers B., Willems P. & Timmerman A. (2005), 'Nieuwe calibratie- en validatiestudie rond het SENTWA-model', Bodemkundige Dienst van België en Laboratorium voor Hydraulica K.U.Leuven, Rapport voor de Vlaamse Milieumaatschappij – Afdeling Kwaliteitsbeheer, Jan. 2005, 163 p.
- Willems P. (2005), 'Exploratory Mission to the Tarim river basin, Xinjiang Province, China, June 07-11, 2005', Laboratorium voor Hydraulica K.U.Leuven en VITO - Center of Expertise of Remote Sensing and Earth Observation Processes, Rapport voor Federaal Wetenschapsbeleid, 27 p.
- Willems P. (2005), 'Additional multi-performance evaluation of the 10 original model simulation results for the Dill catchment', Report for the International Working Group on "Assessing the impact of land use change on hydrology by ensemble modelling", Oct. 2005, 38 p.
- Feng X.-W., Huang Y., Chen X., Veroustraete F., Qinghan D. & Willems P. (2006), 'Support of integrated water resources management by hydrological modelling and remote sensing of arid and semi-arid ecosystems in the Tarim basin – First interim report', Laboratorium voor Hydraulica K.U.Leuven, VITO - Center of Expertise of Remote Sensing and Earth Observation Processes and XIEG-Urumqi, Rapport voor Federaal Wetenschapsbeleid, May 2006, 37 p.
- Willems P. & Veroustraete F. (2006), 'Support of integrated water resources management by hydrological modelling and remote sensing of arid and semi-arid ecosystems in the Tarim basin – Initial report', Laboratorium voor Hydraulica K.U.Leuven en VITO - Center of Expertise of Remote Sensing and Earth Observation Processes, Rapport voor Federaal Wetenschapsbeleid, March 2006, 20 p.
- Blanckaert J. & Willems P. (2006), 'Methode voor het inrekenen van de klimaatverandering in de compositiehydrogrammethode – Analyse trends and cycli', Laboratorium voor Hydraulica K.U.Leuven en IMDC, Rapport MOD 706/10-2 voor de Vlaamse Overheid - Afdeling Waterbouwkundig Laboratorium, Dec. 2006, 83 p.
- Liu T., Willems P., Veroustraete F., Qinghan D., Huang Y. & Qin L. (2006), 'Support of integrated water resources management by hydrological modelling and remote sensing of arid and semi-arid ecosystems in the Tarim basin – Third interim report', Laboratorium voor Hydraulica K.U.Leuven,

VITO - Center of Expertise of Remote Sensing and Earth Observation Processes and XIEG-Urumqi, Rapport voor Federaal Wetenschapsbeleid, Nov. 2006, 82 p.

- Goormans T., Willems P. & Berlamont J. (2007), 'Lokale radar voor rioleringstoepassingen: Voorbereidend onderzoek m.b.t. radarkeuze', Laboratorium voor Hydraulica K.U.Leuven, Rapport voor Aquafin, Febr. 2007, 32 p.
- Goormans T., Willems P. & Berlamont J. (2007), 'Lokale neerslagradar voor rioleringstoepassingen - Voorbereidend onderzoek m.b.t. de nauwkeurigheid van het pluviograafnetwerk te Leuven en de inplantingslocatie voor de radar', Laboratorium voor Hydraulica K.U.Leuven, Rapport voor Aquafin, May 2007, 38 p.
- Baguis P., Boukhris O., Roulin E. & Willems P. (2007), 'Climate change impact on hydrological extremes along rivers and urban drainage systems – I. Literature Review', Laboratorium voor Hydraulica K.U.Leuven & KMI, Rapport voor Federaal Wetenschapsbeleid, May 2007, 57 p.
- Boukhris O., Baguis P., Willems P. & Roulin E. (2007), 'Climate change impact on hydrological extremes along rivers and urban drainage systems – II. Study of climate change scenarios', Laboratorium voor Hydraulica K.U.Leuven & KMI, Rapport voor Federaal Wetenschapsbeleid, May 2007, 92 p.
- Ntegeka V. & Willems P. (2007), 'Climate change impact on hydrological extremes along rivers and urban drainage systems – III. Statistical analysis of historical rainfall series trends and cycles', Laboratorium voor Hydraulica K.U.Leuven & KMI, Rapport voor Federaal Wetenschapsbeleid, May 2007, 29 p.
- Goormans T., Willems P. & Berlamont J. (2007), 'Aanvraag voor de installatie van een lokale neerslagradar op het dak van het Provinciehuis te Leuven', Laboratorium voor Hydraulica K.U.Leuven, Rapport voor Aquafin, June 2007, 35 p.
- Willems P. (2007), 'Extreme-waarden-analyse hoogwaterstanden te Oostende', Laboratorium voor Hydraulica K.U.Leuven, Rapport voor de Vlaamse Overheid - Afdeling Waterbouwkundig Laboratorium, June 2007, 18 p.
- Liu T., Willems P., Veroustraete F., Qinghan D., Huang Y. & Qin L. (2007), 'Support of integrated water resources management by hydrological modelling and remote sensing of arid and semi-arid ecosystems in the Tarim basin – Third interim report', Laboratorium voor Hydraulica K.U.Leuven, VITO - Center of Expertise of Remote Sensing and Earth Observation Processes and XIEG-Urumqi, Rapport voor Federaal Wetenschapsbeleid, May 2007, 99 p.
- Barjas-Blanco T. & Willems P. (2007), 'Onderzoek naar intelligente sturingstechnieken voor operationeel oppervlaktewaterbeheer', Rapport voor de Vlaamse Milieumaatschappij – Afdeling Water, Laboratorium voor Hydraulica & ESAT-SISTA K.U.Leuven, Oct. 2007, 35 p.
- Liu T., Willems P., Veroustraete F., Qinghan D., Feng X-W., Chen X. & Bao A. (2007), 'Support of integrated water resources management by hydrological modelling and remote sensing of arid and semi-arid ecosystems in the Tarim basin – Fourth Interim Report – Distributed hydrological modelling for the downstream basin of Tarim River and advanced remote sensing processing activities', Laboratorium voor Hydraulica K.U.Leuven, VITO - Center of Expertise of Remote Sensing and Earth Observation Processes and XIEG-Urumqi, Rapport voor Federaal Wetenschapsbeleid, Dec. 2007, 156 p.
- Boukhris O.F., Willems P., Vanneuville W., Van Eerdenbrugh K. (2008), 'Climate change impact on hydrological extremes in Flanders: Regional differences', Eindrapport voor de Vlaamse Overheid - Departement Mobiliteit en Openbare Werken - Waterbouwkundig Laboratorium, April 2008, 91 p.
- Boukhris O.F., Willems P., Vanneuville W., Van Eerdenbrugh K. (2008), 'Climate change impact on hydrological extremes in Flanders: Regional differences; Subreport literature review Meuse basin', Eindrapport voor de Vlaamse Overheid - Departement Mobiliteit en Openbare Werken - Waterbouwkundig Laboratorium, April 2008, 27 p.
- Ntegeka V., Willems P., Baguis P., Roulin E. (2008), 'Climate change impact on hydrological extremes along rivers and urban drainage systems. Summary report Phase 1: Literature review and development of climate change scenarios', Report for Belgian Science Policy Office, K.U.Leuven – Hydraulics Section & Royal Meteorological Institute of Belgium, April 2008, 64 p.
- Baguis P., Boukhris O., Ntegeka V., Roulin E., Willems P. (2008), 'Climate change impact on hydrological extremes along rivers and urban drainage systems. I.Literature review', Interim

report for Belgian Science Policy Office, K.U.Leuven – Hydraulics Section & Royal Meteorological Institute of Belgium, May 2008, 57 p.

- Ntegeka V., Baguis P., Boukhris O., Willems P., Roulin E. (2008), 'Climate change impact on hydrological extremes along rivers and urban drainage systems. II. Study of rainfall and ETo climate change scenarios', Interim report for Belgian Science Policy Office, K.U.Leuven – Hydraulics Section & Royal Meteorological Institute of Belgium, May 2008, 112 p.
- Ntegeka V., Willems P. (2008), 'Climate change impact on hydrological extremes along rivers and urban drainage systems. III. Statistical analysis of historical rainfall, ETo and river flow series trends and cycles', Interim report for Belgian Science Policy Office, K.U.Leuven – Hydraulics Section & Royal Meteorological Institute of Belgium, May 2008, 37 p.
- Ntegeka V., Willems P. (2008), 'CCI-HYDR Perturbation Tool: a climate change tool for generating perturbed time series for the Belgian climate', Manual version December 2008, K.U.Leuven – Hydraulics Section & Royal Meteorological Institute of Belgium, December 2008, 7 p.
- Demarée G., Baguis P., Deckmyn A., Debontridder L., Pinnock S., Roulin E., Willems P., Ntegeka V., Kattenberg A., Bakker A., Lenderink G., Bessembinder J. (2009), 'Klimaatscenario's voor Vlaanderen', rapport voor het Instituut voor Natuur- en Bosonderzoek (INBO), Koninklijk Meteorologisch Instituut van België, Koninklijk Nederlands Meteorologisch Instituut (KNMI) & K.U.Leuven – Afdeling Hydraulica, januari 2009
- Baguis P., Ntegeka V., Willems P., Roulin E. (2009), 'Extension of CCI-HYDR climate change scenarios for INBO', Report, K.U.Leuven – Hydraulics Section & Royal Meteorological Institute of Belgium, January 2009, 31 p.
- Vansteenkiste T., Holvoet K., Willems P., Vanneuville W., Ven Eerdenbrugh K., Mostaert F. (2009), 'Effect van klimaatwijzigingen op afvoerdebieten in hoog- en laagwatersituatie en op de globale waterbeschikbaarheid: Deelrapport 1 - Gevalstudie voor Leie en Bovenschelde bekken', rapport juni 2009, WL Rapporten, Projectnr. 706/13a_1, Waterbouwkundig Laboratorium: Antwerpen & K.U.Leuven, België
- Vansteenkiste T., Holvoet K., Willems P., Vanneuville W., Ven Eerdenbrugh K., Mostaert F. (2009), 'Effect van klimaatwijzigingen op afvoerdebieten in hoog- en laagwatersituatie en op de globale waterbeschikbaarheid: Deelrapport 2 - Gevalstudie voor Maasbekken', rapport juni 2009, WL Rapporten, Projectnr. 706/13a_1, Waterbouwkundig Laboratorium: Antwerpen & K.U.Leuven, België
- Liu T., Willems P., Qinghan D., Veroustraete F. (2009), 'Support of integrated water resources management by hydrological modelling and remote sensing of arid and semi-arid ecosystems in the Tarim basin – 2nd Phase II report', Laboratorium voor Hydraulica K.U.Leuven, VITO - Center of Expertise of Remote Sensing and Earth Observation Processes and XIEG-Urumqi, Rapport voor Federaal Wetenschapsbeleid, June 2009, 64 p.
- Vansteenkiste T., Holvoet K., Willems P., Vanneuville W., Ven Eerdenbrugh K., Mostaert F. (2009), 'Effect van klimaatwijzigingen op afvoerdebieten in hoog- en laagwatersituatie en op de globale waterbeschikbaarheid: Deelrapport 3 - Literatuuroverzicht hydrologische modellering van laagwaterscenario's', rapport oktober 2009, WL Rapporten, Projectnr. 706/13a_1, Waterbouwkundig Laboratorium: Antwerpen & K.U.Leuven, België, december 2009, 59 p.
- Willems P., Deckers P., De Maeyer Ph., De Sutter R., Vanneuville W., Brouwers J., Peeters B. (2009), 'Klimaatverandering en waterhuishouding, Wetenschappelijk rapport, MIRA 2009 & NARA 2009, Vlaamse Milieumaatschappij en Instituut voor Natuur- en Bosonderzoek, www.milieurapport.be en www.nara.be
- Brouwers J., Peeters B., Willems P., Deckers P., De Maeyer Ph., De Sutter R., Vanneuville W. (2009), 'MIRA 2009: Milieuverkenning 2030, Hoofdstuk 11 "Klimaatverandering en waterhuishouding", Milieurapport Vlaanderen, Vlaamse Milieumaatschappij, 283-304
- Willems P., De Bruyn L., Maes D., Brouwers J., Peeters B. (2009), 'NARA 2009: Natuurverkenning 2030, Natuurrapport Vlaanderen, Hoofdstuk 2 "Klimaat", Instituut voor Natuur- en Bosonderzoek, rapport INBO.M.2009.7, 55-66
- Liu T., Willems P., Qinghan D., Veroustraete F., Hui Fang, Yan Dou (2010), 'Support of integrated water resources management by hydrological modelling and remote sensing of arid and semi-arid ecosystems in the Tarim basin – 3th Phase II report', Laboratorium voor Hydraulica K.U.Leuven, VITO - Center of Expertise of Remote Sensing and Earth Observation Processes and XIEG-Urumqi, Rapport voor Federaal Wetenschapsbeleid, January 2010, 135 p.

- Van Steenberghe N., Deschamps M., Boeckx L., Van Eerdenbrugh K., Willems P., Mostaert F. (2010), 'Onderhoud voorspellingsmodellen: Deelrapport 1: Actualisatie van het online demermodel', WL Rapporten, 729_05, Waterbouwkundig Laboratorium: Antwerpen, België, versie 2_0 (729_05d), mei 2010
- Liu T., Willems P., Qinghan D., Veroustraete F., Hui Fang, Anming Bao, Xi Chen (2010), 'Support of integrated water resources management by hydrological modelling and remote sensing of arid and semi-arid ecosystems in the Tarim basin – 4th Phase II report', Laboratorium voor Hydraulica K.U.Leuven, VITO - Center of Expertise of Remote Sensing and Earth Observation Processes and XIEG-Urumqi, Rapport voor Federaal Wetenschapsbeleid, June 2010, 156 p.
- Vansteenkiste T., Pereira F., Willems P., Vanneuville W., Van Eerdenbrugh K., Mostaert F. (2010), 'Effect van klimaatwijzigingen op afvoerdebieten in hoog- en laagwatersituatie en op de globale waterbeschikbaarheid: Deelrapport 4 - Opmaak van een ruimtelijke verdeeld model met MIKE SHE en WetSpa', WL Rapporten, 706/13a, Waterbouwkundig Laboratorium: Antwerpen & K.U.Leuven, België, oktober 2010, 94 p.
- Van Steenberghe N., Deschamps M., Boeckx L., Van Eerdenbrugh K., Willems P., Mostaert F. (2010), 'Onderhoud voorspellingsmodellen: Deelrapport 2: Onderzoek naar gebruik radarbeelden voor voorspellingsmodellen', WL Rapporten, 729_05d, Waterbouwkundig Laboratorium: Antwerpen, België, versie 2_0 (729_05d), oktober 2010, 34 p.
- Van Steenberghe N., Boeckx L., Van Eerdenbrugh K., Willems P., Mostaert F. (2010), 'Onderzoek hydrologische modellen NAM – PDM – VHM', WL Rapporten, 729_05d, Waterbouwkundig Laboratorium: Antwerpen, België, versie 2_0 (729_05d), oktober 2010, 42 p.
- Van Reusel B., Van Steenberghe N., Boeckx L., Mostaert F. (2010), 'ELMO: gebruikershandleiding kwaliteitscontrole', WL rapporten, 729_14. Waterbouwkundig Laboratorium: Antwerpen, België, Versie 2_0 (729_14), november 2010, 30 p.
- Van Reusel B., Van Steenberghe N., Boeckx L., Mostaert F. (2010), 'ELMO: technische documentatie', WL rapporten, 729_14. Waterbouwkundig Laboratorium: Antwerpen, België, Versie 2_0 (729_14), november 2010, 12 p.
- Willems P., Ntegeka V., Baguis P., Roulin E. (2010), 'Climate change impact on hydrological extremes along rivers and urban drainage systems'. Final report for Belgian Science Policy Office, K.U.Leuven – Hydraulics Section & Royal Meteorological Institute of Belgium, December 2010, 110 p.
- Vansteenkiste T., Pereira F., Willems P., Vanneuville W., Van Eerdenbrugh K., Mostaert F. (2011), 'Effect van klimaatwijzigingen op afvoerdebieten in hoog- en laagwatersituaties en op de globale waterbeschikbaarheid: Deelrapport 4 - Impactanalyse met de ruimtelijke verdeelde modelcodes MIKE SHE en WetSpa - gevalstudie in Vlaanderen'. Versie 2_0. WL Rapporten, 706_13a. Waterbouwkundig Laboratorium: Antwerpen, België, mei 2011, 135 p.
- Liu T., Willems P., Qinghan D., Veroustraete F., Hui Fang, Anming Bao, Xi Chen (2011), 'Support of integrated water resources management by hydrological modelling and remote sensing of arid and semi-arid ecosystems in the Tarim basin – 5th Phase II report', Laboratorium voor Hydraulica K.U.Leuven, VITO - Center of Expertise of Remote Sensing and Earth Observation Processes and XIEG-Urumqi, Rapport voor Federaal Wetenschapsbeleid, January 2011, 103 p.
- Van Steenberghe N., Boeckx L., Deschamps M., Willems P., Van Eerdenbrugh K. (2011), 'Onderhoud voorspellingsmodellen: Deelrapport 3: Invloed data assimilatie op de voorspellingen', WL Rapporten, 729_05d, Waterbouwkundig Laboratorium: Antwerpen, België, versie 2_0 (729_05d), februari 2011, 22 p.
- Van Steenberghe N., Boeckx L., Deschamps M., Van Eerdenbrugh K., Mostaert F. (2011), 'Handleiding bij tool betrouwbaarheidsintervallen: onderhoud voorspellingsmodellen', WL Technische Nota's, 49. Waterbouwkundig Laboratorium: Antwerpen, Versie 2_0 (729_05d), april 2011, 11 p.
- Staes, J., Willems P., Marbaix, Ph., Vrebos, D., Bal, K., Meire, P. (2011), 'Impact of climate change on river hydrology and ecology: A case study for interdisciplinary policy oriented research'. Final report for Belgian Science Policy Office, U.Antwerp - ECOBE, K.U.Leuven – Hydraulics Section & UCL - ASTR, July 2011, 103 p.
- Liu, T., Willems, P., Veroustraete, F., Qinghan, D., Poelmans, L., Engelen, G., Qin, L., Fang, H., Feng, X-W., Yue, H., Qian, J., Bao, A.M., Chen, X. (2011), 'Support of integrated water resources

management by hydrological modelling and remote sensing of arid and semi-arid ecosystems in the Tarim basin – ‘Final Report Phase II’, Hydraulics Division K.U.Leuven, VITO - Centers of Expertise TAP and RMA and XIEG-Urumqi, Report for Belgian Science Policy Office, June 2011, 166 p.

- Keupers, I., Willems, P., Sainz, J-F., Bricheno, L., Wolf, J., Polton, J., Howarth, J., Carniel, S., Staneva, J. (2011), ‘Methodology (including best practice guidelines) on how to identify and incorporate ‘concentrated’ and ‘distributed’ run-off in pre-operational forecasts, based on the input and requirements from our users’. FIELD_AC report D3.1, June 2011, 90 p.
- Willems, P., Ntegeka, V., Decloedt, L-C., Monbaliu, J. (2011). ‘THESEUS - Scheldt Estuary hydroclimatic drivers report’, June 2011, 89 p.
- Vansteenkiste T., Pereira F., Willems P., Vanneuville W., Van Eerdenbrugh K., Mostaert F. (2011), ‘Effect of climate change on the hydrological regime of navigable water courses in Belgium. Subreport 1 - Literature review of the climate research in Belgium’, WL Rapporten, 706_18. Waterbouwkundig Laboratorium and K.U.Leuven: Antwerpen, Versie 2_0 (706_18), September 2011, 43 p.
- Vansteenkiste T., Pereira F., Willems P., Mostaert F. (2011). ‘Effect of climate change on the hydrological regime of navigable water courses in Belgium. Subreport 2 – Climate change impact analysis by conceptual models’. WL Rapporten, 706_18. Waterbouwkundig Laboratorium and K.U.Leuven: Antwerpen, Conceptnota, December 2011, 57 p.
- Van Steenberghe, N., Boeckx, L., Deschamps, M., Willems, P., Mostaert, F. (2012). ‘Bijstand voorspellingen. Deelrapport 1 - Onderzoek naar gebruik van bodemvochtgehalte als trigger voor overstromingsvoorspellingen’. Versie 1.0. WL Technische Nota’s (project 729_16), Waterbouwkundig Laboratorium: Antwerpen, maart 2012, 19 p.
- Vansteenkiste T., Pereira F., Willems P., Mostaert F. (2011). ‘Effect of climate change on the hydrological regime of navigable water courses in Belgium. Subreport 3 – Climate change impact analysis by distributed models’. WL Rapporten, 706_18. Waterbouwkundig Laboratorium and K.U.Leuven: Antwerpen, Conceptnota, February 2012, 71 p.