PERSONAL INFORMATION

Frédérique LARRARTE

frederique.larrarte@univ-eiffel.fr

https://orcid.org/0000-0001-5536-2170

Sex Female | Nationality French

Project manager and researcher on fluid dynamics

WORK EXPERIENCE

2020 -	Senior researcher at Univ. Gustave Eiffel (Marne le Vallée) and associated researcher at the Laboratoire d'Hydraulique St Venant (Chatou)
2017 - 2019	Project manager and researcher on hydraulics of free surface flows • Involved into the SSHEAR project (http://sshear.ifsttar.fr/) • Associated researcher at the Laboratoire d'Hydraulique St Venant (Chatou) • Member of the Engineering and animation team if the du Pole Mer Bretagne Atlantique (Martime cluster)
1997 - 2017	Project manager and researcher on hydraulics of free surface flows French Institute of Science and Technology for Transport, Development and Networks (www.ifsttar.fr) Geotechnical engineering, Environment, Natural hazards and Earth sciences Department Water and Environment Laboratory Allée des Ponts et Chaussées, CS 5004, 44 344 Bouguenais cedex. Coordination of research projects, team leader, supervision of young scientists and technical staff, fluid dynamics, in situ measurements, prototype development CFD
1995 - 1996	Science and Technology Post Doctoral Fellow in Fluid Mechanics Ship Research Institute (NMRI, http://www.nmri.go.jp/index_e.html) , Mitaka, Tokyo, Japan Naval hydrodynamics, viscous drag reduction, towing tank experiments, CFD
1994 - 1995	Post Doctoral Researcher in Fluid Mechanics Ecole Nationale Supérieure de Technique Avancées (https://www.ensta-paristech.fr/en), Palaiseau, France Cavitation, experiments, image analysis
1990 -1994	Junior Researcher in Fluid Dynamics Ecole Centrale de Nantes (*https://www.ec-nantes.fr/)*, France Naval hydrodynamics, wave drag reduction, towing tank experiments, CFD

EDUCATION AND TRAINING

2017	Continuous professional training « MRE Referee » - Geotechnics (21 hours) - Hydrodynamics (14 hours) - Maritime areas : a share space ! (7 hours) - Maritime area and MRE (7 hours) - State of the art (14 hours)

2016	• Continuous professional training «hydraulics and societies » (15 hours) • Continuous professional training « Risks and coastal societies) », (15 hours) • Continuous professional training « Press and climate change », (15 hours) • Continuous professional training « Elementary electric degree » (14 hours).	
2006	Habilitation à Diriger des Recherches Université de Caen	ISCED 8
1994	Doctorat (Ph. D degree) - Ecole Centrale de Nantes & University of Nantes	ISCED 8
1989	Maîtrise (master 1) of mechanics – University of Bordeaux	ISCED 6-7

PERSONAL SKILLS

Mother tongue(s): French

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	B2
Spanish	B1	B2	B1	B1	B1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Organisational / managerial skills (see Appendix)
- Coordination of multidisciplinary projects,
- Team leader,
- Supervisor of in situ experiments involving young scientists, technical staff, city authority technical staff

Scientific and technical skills
- Fluid mechanics
- Hydraulics of free surface flows
- Experiments,
- Member of the hydrometric standards committee,

Productions (see Appendix)
- Prototypes development
- papers in Web of Sciences journals
- papers in professional journals
- communications in international congress

ADDITIONAL INFORMATION

Driving licence
- Full car driving licence (French)
- Leisure boat driving licences

Loisirs
- Sailing, rowing,
- reading

References

Pr. Hubert CHANSON
School of Civil Engineering, The University of Queensland, Brisbane QLD 4072, Australia;
h.chanson@uq.edu.au

Eric GAUME
Directeur du Département Géotechnique, environnement, risques naturels et sciences de la terre
Université Gustave Eiffel – Campus de Nantes, CS4, 44344 Bouguenais cedex, France ;
eric.gaume@ifsttar.fr

Appendix 1 – Management of projects

- 2015 - 2019 : co animation of the work package 3 of the SSHEAR project (French National Research Agency 2014) – 6 partners – 4352 k€. The main objective of SSHEAR (Soils, Structures and Hydraulics: Expertise and Applied Research) is The main objective of the SSHEAR project is to improve understanding of scouring process through the use of innovative observation tools and physical and numerical hydraulic modeling, from laboratory to full-scale, for the purpose of optimizing methods specific to diagnostics, advanced warning and general management procedures (http://sshear.ifsttar.fr/.

- 2012 - 2017: Management of the MENTOR project (French National Research Agency Ecotech 2011), 10 partners, 2900 k€. The main objective of MENTOR (MEasurement sites conception method for sewer NeTwORks.) consists to propose a methodology for the design and the audit of discharge and particulate pollutant loads measurement sites in sewer systems. Additional information can be downloaded on http://wikhydro.developpement-durable.gouv.fr/index.php/Autosurveillance_et_diagnostic_en_r%C3%A9seau_d%27assainissement_-_Projet_MENTOR .This project takes benefit of the COACHS project.

- 2010 – 2014 : Management of the COACHS project (French Ministry of Sustainable Development – C2D2 program 2009), 4 partners, 400 k€. The COACHS (COmputations and their Applications in Channel Hydraulics for Sewers) project has provided operational tools for data processing and use. The 4 technical guides and additional information can be downloaded on http://wikhydro.developpement-durable.gouv.fr/index.php/Autosurveillance_et_diagnostic_en_r%C3%A9seau_d%27assainissement_-_Projet_MENTOR.

- 2010 – 2011 : Management of the Sonar project (Institut Carnot Vitres - 2009) for using a sonar to study the solids settled at the invert of sewer channels.

- 2009 – 2012 : Management of the SER (Sédiment en Réseau) project. This project aimed at improving our knowledge on sediment dynamics within sewers, the main results are being published, additional information can be downloaded on: http://actions-incitatives.ifsttar.fr/seminaires/jee/2013/.

Appendix 2 : Main productions

Appendix 2.1 - Prototypes development.

- **Continuous monitoring of sediment height :** we developed a device (named Furrina) aiming at continuously recording the deposit level in a sewer. I contributed and coordinated the definition and choice of the technical performances and constraints, I supervised the building, and I have used the prototype during in-situ experiments.

- **2D samplers** : we developed one two dimensional samplers of the velocity field (named Cerbères), one of the suspended solids field (named Orphée), one of both fields (named Hydre). Those samplers have been used to establish velocity and suspended solids maps within sewers and to investigate the influence of the meteorological context (dry or rain weather), the influence of the compound section on the fields. I have coordinated the definition and choice of the technical performances and constraints, I have supervised the buildings, and we have used those prototypes during in-situ experiments.

Appendix 2.2 : Chapter.

CH 1. Larrarte F., Lepot M., Clemens-Meyer F., Bertrand-Krajewski J.-L., Ivetić D., Prodanović D., Stegeman B., (2021), Chapter 3: Water level and discharge measurements, In Metrology in Urban Drainage and Stormwater Management: Plug and Pray , IWA publishing, doi :10.2166/9781789060119_0035, https://iwaponline.com/ebooks/book/835/Metrology-in-Urban-Drainage-and-Stormwater,

Appendix 2.3 : papers in academic journals.

RI 1. Chevalier, C., Larrarte, F., (2022), Real time instability of flow close to a scour affected abutment. Environ Fluid Mech (2022). https://doi.org/10.1007/s10652-022-09842-9

RI 2. Durand A, Mehel A., Fokoua G. Murzyn F., Puech S., Larrarte F, (2021) Numerical and experimental investigations on brake particle dispersion in the flow generated by a train in an underground station, Atmospheric Pollution Research 12 (2021) 101189, doi:/10.1016/j.apr.2021.101189

RI 3. M. Oukacine, S. Proust, F. Larrarte, N. Goutal, (2021), Experimental flows through an array of emerged or slightly submerged square cylinders over a rough bed. Scientific Data , Nature Publishing Group, 2021, 8 (1), doi:10.1038/s41597-020-00791-w

RI 4. F. Larrarte, C. Chevalier, L. Battist, H. Chollet, (2020), Hydraulics and bridges : a French case study of monitoring of a bridge affected by scour, Flow Measurement and Instrumentation 74, . DOI: 10.1016/j.flowmeasinst.2020.1017.83

RI 5. M. Le Vern, O. Sediki, A; Razakamanantsoa, F. Murzyn, F. Larrarte, (2020), Experimental assessment of dust emissions on compacted soils degraded by traffic, 369Atmosphere 2020, 11, 369; doi:10.3390/atmos11040369

RI 6. M. Le Vern, O. Sediki, A; Razakamanantsoa, F. Murzyn, F. Larrarte, (2020), Experimental study of particle lift initiation on roller compacted sand-clay mixtures, Environmental Geotechnics, Environmental Geotechnics XXXX(XXXX): 1–XX, https://doi.org/10.1680/jenge.19.00172

RI 7. R. Rodriguez, F. Murzyn, A. Mehel, F. Larrarte, (2020), Dispersion of ultrafine particles in the wake of car models: a wind tunnel study, Journal of Wind Engineering & Industrial Aerodynamics 198 (2020) 104109, /doi.org/10.1016/j.jweia.2020.104109

RI 8. F. Murzyn, G. Fokoua, R. Rodriguez, C. Shen, F. Larrarte, A. Mehel, (2020), Car Wake Flows and Ultrafine Particle Dispersion: From Experiments to Modelling, Atmosphere 2020, 11, 39; doi:10.3390/atmos11010039

RI 9. A. El Bahlouli, F. Larrarte, (2018), Proposal for improving discharge quantification in urban drainage, Flow Measurement and Instrumentation 60, 51–56, DOI: 10.1016/j.flowmeasinst.2018.02.014

RI 10. R. Rodriguez, F. Murzyn, J. Aubry, A. Mehel, F. Larrarte, (2018), An innovative LDV data processing method for statistical error corrections. Application to homogeneous and non-homogeneous seeding, Flow Measurement and Instrumentation 60, 67–77, DOI: 10.1016/j.flowmeasinst.2018.02.011

RI 11. A Belleville, G. Pierrefeu, J. Le Coz, F. Larrarte, P. Marchand, M. Pinatton, B. Augeard, P.-M. Bechon, D. Besson, P. Chisne, G. Dramais, C. Josserand, S. Poligot-Pitsch, R. Puechberty, (2017), Hydrometry and standardization, La Houille Blanche, n° 6, 60-69, DOI: 10.1051/lhb/2017059

RI 12. F. Larrarte, M. Dufresne, E Mignot, G Lipeme Kouyi, N Rivière, J Vazquez, C Joannis, (2017), Flow measurement and computational fluid dynamics: contribution to the assessment and control of uncertainties on mean velocity measurement, La Houille Blanche, n° 6, 70-77, DOI: 10.1051/lhb/2017060

RI 13. I. Carnacina, F. Larrarte, N. Leonardi, (2017), Acoustic measurement and morphological features of organic sediment deposits in combined sewer networks, Water Research 112, 279-290, DOI: 10.1016/j.watres.2017.01.050

RI 14. F. Larrarte, N. Hemmerlé, L. Lebouc, B. Riochet, (2017), Additional elements regarding the muddy layer in combined sewers, Urban Water Journal, Vol. 14, No . 8, DOI: 10.1080/1573062X.2017.1325499

RI 15. F. Larrarte, E. Szturycz, L. Lebouc, B. Riochet, (2016), New technique for continuous monitoring of sediment height, *Flow Measurement and Instrumentation*, *Volume 49*, *June*, *40-45,* DOI: 10.1016/j.flowmeasinst.2016.04.005

RI 16. F. Larrarte, (2015), Velocity and suspended solids distributions in an oval-shaped channel with a side bank, Urban Water Journal, Volume 12, Issue 2, February, 165-173, DOI: 10.1080/1573062X.2013.871043

RI 17. I. Carnacina, F. Larrarte, (2014), Coupling acoustic devices for monitoring combined sewer network sediment deposits, Water Science & Technology Volume 69, Issue 8, 1653–1660, DOI: 10.2166/wst.2014.064

RI 18. L. Lassabatere, J. H. Pu, H. Bonakdari, C. Joannis, F. Larrarte, (2013), Velocity Distribution in Open Channel Flows: An Analytical Approach for the Outer Region, Journal of Hydraulic Engineering, Volume 139, Issue 1, 37-43, DOI: 10.1061/(ASCE)HY.1943-7900.0000609

RI 19. F. Larrarte, P. François, (2012), Attenuation of an ultrasonic beam by suspended particles and range of acoustic flow meters in sewer networks, Water Science & Technology, Volume 65, Issue 3, 478-483, DOI: 10.2166/wst.2012.873

RI 20. F. Larrarte, M.-N. Pons, (2011), Suspended solids concentration in wastewater: Influence of sampling conditions, Urban Water Journal, Volume 8, Issue 6, 397–404, DOI: 10.1080/1573062X.2011.630094

RI 21. E. Le Barbu, F. Larrarte, (2010), Acoustic profilers and urban pollutant fluxes, European Journal of Environmental and Civil Engineering, Volume 14, Issue 5, 637-651, DOI: 10.3166/EJECE.14.637-651

RI 22. J. H. Pu, H. Bonakdari, L. Lassabatère, C. Joannis, F. Larrarte, (2010), Turbulent velocity profiles : a new law for narrow channels, La Houille Blanche, Issue 3, 65-70, DOI: 10.1051/lhb/2010036

RI 23. J. Le Coz, F. Larrarte, G. Saysset, G. Pierrefeu, J.-F. Brochot, P. Marchand, (2009), Hydrological measurements by Doppler profiling (aDcp) in France : application to streams and urban networks , La Houille Blanche, Issue 3, 115-122, DOI: 10.1051/lhb/2009035

RI 24. F. Larrarte, J-B. Bardiaux, P. Battaglia, C. Joannis, (2008), Acoustic Doppler flow-meters : a proposal to characterize their technical parameters, Flow Measurement and Instrumentation; Volume 19, Issue 5, 261-267, DOI: 10.1016/j.flowmeasinst.2008.01.001

RI 25. F. Larrarte, (2008), Suspended solids within sewers : an experimental study, Environmental Fluid Mechanics, Volume 8, Number 3 / juin, 249-261, DOI: 10.1007/s10652-008-9073-8

RI 26. H. Bonakdari, F. Larrarte, L. Lassabatere, C. Joannis, (2008), Turbulent velocity profile in fully-developed open channel flows, Environmental Fluid Mechanics, Volume 8, Issue 1, 1-17, DOI: 10.1007/s10652-007-9051-6

RI 27. H. Bonakdari, F. Larrarte, C. Joannis, D. Levacher, (2008), Velocity field and shear stress in a sewer , La Houille Blanche, Issue 3, 20-25, DOI: 10.1051/lhb:2008022

RI 28. H. Bonakdari, F. Larrarte, C.Joannis, (2008), Study of the shear stress in narrow channels : application to sewers, Urban Water Journal, Volume 5 Issue 1, 15-20, DOI: 10.1080/15730620701726275

RI 29. F. Larrarte, (2006), Velocity fields in sewers : an experimental study, Flow Measurement and Instrumentation, Volume 17, Issue 5, 282–290, DOI: 10.1016/j.flowmeasinst.2006.08.001

RI 30. V. Ruban, F. Larrarte, M. Berthier, L. Favreau, Y. Sauvourel, L. Letellier, M.-L. Mosisni and G. Raimbault, (2005), Quantitative and qualitative hydrologic balance for a suburban watershed with a separate sewer system (Nantes, France), Water Science & Technology, Volume 51, Issue 2, 231–238.

RI 31. P. Jaumouillié, F. Larrarte, V. Milisic, (2002), Numerical and experimental investigations of the pollutant distribution in sewers, Water Science & Technology, Volume 45, Issue 7, 83–93.

RI 32. F. Larrarte, J.P. Legendre, Y. Sauvourel, F. Gomin, R. Simon, G. Yviquel, C. Noel, (2001), Doppler velocimetry : implementation of a testing procedure in laboratory and in situ observations, Houille Blanche, Issue 5, 67-74, DOI: 10.1051/lhb/2001059

RI 33. T.M. Pham, F. Larrarte, D.H. Fruman, (1999), Investigation of unsteady sheet cavitation and cloud cavitation mechanism, Journal of Fluid Engineering , Volume 121, Issue 2, 289-296, DOI: 10.1115/1.2822206

Appendix 2.3 : Papers in professionnal journals.

RP 1. A. El Bahlouli, E. Mignot, F. Denis, N. Riviere, A. Dalmon, G. Lipeme Kouyi, C. Joannis, F. Larrarte, (2017), Fiabilité de la mesure de vitesse débitante à l'aval d'une singularité en réseau d'assainissement, Techniques sciences méthodes, génie urbain génie rural TSM 2017 :1/2, 26-40.

RP 2. F. Larrarte, S. Vareilles, M. Dufresne, N. Riviere, M.N. Pons, G. Lipeme Kouyi, C. Joannis, R. Claverie, G. Chebbo, B. Riochet, K. Wouter Wasiak, R. Visiedo, (2015), MENTOR ou une méthodologie et des outils opérationnels de conception et de qualification de sites de mesures en réseau d'assainissement, TSM, N°5; 5, 49–65

RP 3. F. Larrarte, H. Bonakdari, C. Joannis, (2010), Qualification et conception de sites de mesures débitmétriques en réseaux d'assainissement, Bulletin des Laboratoires des Ponts et Chaussées, N°. 277, 31-41.

RP 4. H. Bonakdari, F. Larrarte, C. Joannis, D. Levacher, (2008), Méthodologie de qualification de site de mesures en réseau d'assainissement - Application à la débitmétrie en collecteur d'assainissement, Bulletin des Laboratoires des Ponts et Chaussées, N° 272, 9-19.

RP 5. F. Larrarte, L.-M. Cottineau, (2008), Le projet Hydre : échantillonnage 2D des vitesses et des concentrations en collecteur d'assainissement, Bulletin des Laboratoires des Ponts et Chaussées, N°. 272, 21-32.

RP 6. F. Larrarte, H. Bonakdari, C. Joannis, D. Levacher, (2007), Effets d'une déviation sur les champs de vitesses en réseaux d'assainissement, TSM. Techniques sciences méthodes, génie urbain génie rural, N° 11, 43 – 50.

RP 7. H. Bonakdari, F. Larrarte, C. Joannis, (2007), Coude et champs de vitesse en réseaux d'assainissement, Revue Européenne de Génie Civil, Vol. 11 – N°4/ 2007, 507-519.

RP 8. H. Bonakdari, F. Larrarte, J.-B. Bardiaux, (2007), Experimental and computational study of velocity fields in narrow or compound section sewers, Water Practice & Technology, Vol. 2, n°2, http://www.iwaponline.com/wpt/002/02/default.htm.

RP 9. F. Larrarte, J-B Bardiaux, Ph Battaglia, C. Joannis, (2006), Vélocimétrie Doppler : mise au point d'un protocole d'essai en laboratoire, TSM. Techniques sciences méthodes, génie urbain génie rural N° 6 , 58 – 65.

RP 10. F. Larrarte, L.-M. Cottineau, (2005), Nouveaux instruments pour connaître les champs de vitesses et de concentrations, Revue Européenne de Génie Civil, Vol. 9/7-8 – 2005, 963-978.

RP 11. F. Larrarte, J.F. Sini, J-P Legendre, Y. Sauvourel, (2000), Champs de vitesses et de concentrations en matières en suspension dans les réseaux d'assainissement : approches expérimentales et numériques, Bulletin des Laboratoires des Ponts et Chaussées, N°. 226, 75-87.

RP 12. F. Larrarte, Y. Kodama, (1997), Trajectory of bubbles under a ship hull and scale effects, Journal of the Kansai Society of Naval Architects of Japan, N° 228, September, 1-6.

Appendix 2.4 : International congresses.

CI 1. B. Bolon, C. Prétot, C. Clanet, F. Larrarte, R. Carmigniani, (2021), Drafting of two swimmers, Conference sport physics 2021, ENS Lyon, 6_8 December 2021

CI 2. C. Chevalier; F. Larrarte; F. Schmidt; H. Chollet; E. Durand; D. Pham Van Bang; A. Bontemps; P. Sergent; P. Gondret; C. Morize; S. De La Roque; M. Cheetham, (2021), A review of Soils, Structures and Hydraulics: Expertise and Applied Research (SSHEAR) project, 10th International Conference on Scour and Erosion, 18-21 octobre, virtual.

CI 3. A. Doumic, F. Larrarte, R. Rtimi, N. Gouta, (2021), Investigation of the hydraulics in flooded housing estate, SimHydro 2021: Models for complex and global water issues - Practices and expectations, 16-18 June 2021, Sophia Antipolis

CI 4. M. Le Vern, O. Sediki 1, A. Razakamanantsoa, F. Murzyn, F. Larrarte, P. Insenga, P. Gotteland, (2021), Development of a model to quantify dust emissions from truck traffic on earthmoving sites: approach and preliminary results, Geo-Environmental Engineering GEE2021 ESITC-UniCaen, Caen, France, May 20-21, 2021

CI 5. M. Le Vern, A. Razakamanantsoa, F. Murzyn, F. Larrarte, V. Cerezo, (2021), Study on a test track of dust resuspension induced by a vehicle, 23rd Transport and Air Pollution Conference, Graz, 30 mars au 1 avril 2021.

CI 6. M. Oukacine, R. Rtimi, N. Goutal, V. Loizeau, S. Benhamadouche, S. Proust, F. Larrarte, (2020), Large Eddy Simulation for flows through emerged or slightly submerged square cylinders, River Flow 2020, Delft, 7-10 juillet

CI 7. M. Cheetham C. Chevalier, F. Larrarte, F. Schmidt, E. Durand, P. Sergent, P. Gondret, S. De La Roque, Soils, Structures and Hydraulics: Expertise and Applied Research (SSHEAR) Project, 12th World Congress On Railway Research, Tokyo (Japon), October 28 To November 1 2019.

CI 8. A. Durand, A. Mehel, F. Murzyn, S. Puech, F. Larrarte, Cfd Study Of Dispersion Of Particles Generated By Mechanical Braking: Application To Trains In Underground Stations, 12th World Congress On Railway Research, Tokyo (Japon), October 28 To November 1 2019.

CI 9. F. Larrarte , F. Schmidt , E. Durand, A. Bontemps, Y. Della Longa, M. , S. de la Roque – Cofiroute, M. Hosseingholian, C. Chevalier, (2019) A French experience of Structural Health Monitoring of scour affecting river infrastructures., Smart Rivers 2019, Lyon, September 30 - October 3, 2019.

CI 10. F. Larrarte, H. Chollet, L. Battist, Y. Della Longa, C. Chevalier , (2019) A French Experience of Continuous Scour Monitoring on a Real Site, 38th IAHR World congress, Panama, 1-6 september.

CI 11. F. Larrarte, F.Schmidt, N. Boujia, V. Vidal, A. Bontemps, S. de la Roque, C. Chevalier (2019), Some Elements About Scale Effect on Scour Studies, 38th IAHR World congress, Panama, 1-6 september.

CI 12. R. Rodriguez, F. Murzyn, A. Méhel, F.. Larrarte, (2019), Ultrafine particle dispersion in the wake of a squareback vehicle model, 23rd Transport and Air Pollution Conference, Thessaloniki, 15 au 17 mai 2019

CI 13. A. Durand, A. Mehel, F. Murzyn, S. Puech, F. Larrarte, (2019), Numerical study of particle dispersion emitted from train brakes in underground station, 23rd Transport and Air Pollution Conference, Thessaloniki, 15 au 17 mai 2019

CI 14. C. Chevalier, F. Larrarte, F. Schmidt, E. Durand, P. Sergent, P. Gondret, S. de la Roque, M. Cheetham, M. Hosseingholian, (2018), Research program SSHEAR: Recent advances on the understanding and the control of scour phenomena, 9th International Conference on Scour and Erosion, 5 au 8 novembre 2018, Taipei, Taiwan

CI 15. E. Florens, C. Chevalier, F. Larrarte, F. Schmidt, E. Durand, (2018), Scour monitoring on bridge pier—methodology and implementations, 9th International Conference on Scour and Erosion, 5 au 8 novembre 2018, Taipei, Taiwan

CI 16. E. Florens, C. Chevalier, F. Larrarte, F. Schmidt, E. Durand, (2018), Scour monitoring on bridge pier – methodology and implementation, River Flow 2018, 5 au 8 Septembre 2018, Lyon (France).

CI 17. C. Chevalier, F. Larrarte, F. Schmidt, D. Pham-Van-Bang, E. Durand, P Gondret, S. De La Roque, M. Cheetham, M. Hosseingholian, (2017), Compréhension et maîtrise des risques d'affouillements: développements récents (Understanding and control of scour phenomena: recent advances), 3rd International Symposium GEORAIL 2017, 23 et 24 novembre 2017, Marne-La-Vallée (France).

CI 18. C. Chevalier, F. Larrarte, F. Schmidt, D. Pham-Van-Bang, E. Durand, P. Gondret, S. de la Roque, M. Cheetham, M. Hosseingholian, (2017), Compréhension et maîtrise des risques d'affouillements : développements récents (Understanding and control of scour phenomena: recent advances), 19th International Conference on Soil Mechanics and Geotechnical Engineering, 17 au 21 sept. 2017, Seoul.

CI 19. F. Larrarte, C. Chevalier, O. Ndoye, E. Durand, D. Pham-Van-Bang, S. de La Roque, (2016), Scour and solid transport on civil engineering structures – a field study, proceedings of THESIS 2016, Two-Phase Modelling For Sediment Dynamics In Geophysical Flows, Tokyo Japan, September 12-14, 2016

CI 20. J.J. Randrianarimanana, L. Lebouc, E. Szturyz, F. Larrarte, (2015), Experimental study of the velocity and suspended solids distribution in wastewater system, E-proceedings of the 36th IAHR World Congress, 28 June – 3 July, 2015, The Hague, the Netherlands.

CI 21. J.J. Randrianarimanana, X. France, F. Larrarte, L. Lebouc, D. Mabilais, P. Augris, M.N. Pons, (2014), Fate of biofilm in sewer and wastewater flowrate entropy, IWA World Water Congress, 21-26 september, Lisbon.

CI 22. N. Hemmerle, J.J. Randrianarimanana, C. Joannis, F. Larrarte, (2014), Hydraulics and deposit evolution in sewers, 9th International Symposium on Ultrasonic Doppler Methods for Fluid Mechanics and Fluid Engineering, 27-29 August, Strasbourg.

CI 23. N. Hemmerle, C. Joannis, F. Larrarte, (2013), Does lutocline exist in sewers ?, 16th International Conference Transport and Sedimentation of Solid Particles, Rostock, Septembre 2013

CI 24. F. Larrarte, S. Vareilles, M. Dufresne, N. Rivière, M.N. Pons, G. Lipeme Kouyi, C. Joannis, R. Claverie, G. Chebbo, B. Riochet, K. Wouter Wasiak, R. Visiedo, (2013), MENTOR or how to qualify measurement sites in sewer systems, accepted for 11th IWA conference on instrumentation control and automation, 18-20 September 2013, Narbonne, France

CI 25. I. Carnacina, .F. Larrarte, (2013), Coupling acoustic devices to monitor combined sewer networks sediment deposits, 7th International Conference on Sewer Processes & Networks, 28 - 30 August 2013, Sheffield, 425-432.

CI 26. A. El Bahlouli, C. Joannis and F. Larrarte, (2013), Effect of a deviation on flow rate measurements in sewer channel, 7th International Conference on Sewer Processes & Networks, 28 - 30 August 2013, Sheffield, 433-440.

CI 27. H. S. Jensen, R Sekar, F. Larrarte, A. M. Osborn, C. A. Biggs, S. J. Tait, (2013), Describing Bacterial Community Diversity in Combined Sewers, 7th International Conference on Sewer Processes & Networks, 28 - 30 August 2013, Sheffield, 149-156.

CI 28. M.N. Pons, F. Larrarte, X. Franfe, L. Lebouc, D. Mabilais, P. Augris, (2013), Biofilm Development and Hydraulic Conditions in Sewers, 7th International Conference on Sewer Processes & Networks, 28 - 30 August 2013, Sheffield, 281-288.

CI 29. T. Valeyre, B. Béchet, F. Larrarte, (2013), Physical and chemical parameters in wastewater and at the water-sediment interface in sewer network, 7th International Conference on Sewer Processes & Networks, 28 - 30 August 2013, Sheffield, 377-384.

CI 30. F. Larrarte, S. Vareilles, M. Dufresne, N. Rivière, M.N. Pons, G. Lipeme Kouyi, C. Joannis, R. Claverie, G. Chebbo, B. Riochet, K. Wouter Wasiak, R. Visiedo, L. Solliec, (2013), Qualifying measurement sites in sewer systems: methodology and operational tool, 8th International Conference Novatech, 23-27 Juin, Lyon.

CI 31. M.N. Pons, X. France, F. Larrarte, (2013), Monitoring the development of biofilms on different materials in sewers, 9th IWA International Conference on Biofilm Reactors, 28 au 31 mai 2013

CI 32. A. Jerez, C. Chevalier, F. Larrarte, (2012), Erosion measurement on immersed situations: a state of the art, 6th International Conference on Scour and Erosion, Paris - August 27-31, 2012

CI 33. F. Larrarte, M-N Pons, (2011), Biofilm growth and hydraulic conditions in sewers, 34rd IAHR Congress, Brisbane, 26 juin 1er juillet 2011, actes sur CD.

CI 34. F. Larrarte, X. France, M-N Pons, (2011), Biofilm growth and hydraulic conditions in sewers, Watermatex Congress, San Sebastian, 20 au 22 juin 2011, actes sur CD.

CI 35. E. Le Barbu, F. Larrarte, (2010) Acoustic profilers and pollutant flux measurements in urban hydrology, Novatech 2010, 27 juin - 1er juillet 2010.

CI 36. H. S. Jensen, R. Sekar, P. Deines, J. B. Boxall, A. M. Osborn, S. Tait, F. Larrarte and C. A. Biggs, (2009), Community profiling of bacteria in sewer biofilms, Processes in biofilm, Davies, California, September, août 2009.

CI 37. F. Larrarte, E. Le Barbu, (2009), Acoustic profilers : a step to urban pollutant flux measurements, 33rd IAHR Congress, Vancouver, 9 au 14 aout 2009, actes sur CD.

CI 38. F. Larrarte, P. François, (2008), Suspended solids and attenuation of ultrasonic beam, 6th International Symposium on Ultrasonic Doppler Methods for Fluid Mechanics and Fluid Engineering, Prague, 9 au 11 sept 2008.

CI 39. F. Larrarte, P. François, (2008), Suspended solids and attenuation of ultrasonic beam, 11th International Conference on Urban Drainage, Edinburgh, Scotland, UK, 2008.

CI 40. F. Abda, D. Ensminger, P. François, F. Larrarte, A. Pallarès, P. Schmitt, (2008), In situ comparison of velocity and concentration measurements techniques, 11th International Conference on Urban Drainage, Edinburgh, Scotland, UK, 2008.

CI 41. F. Larrarte, LM Cottineau, (2008), Pollutant fields : the Hydre project, International Symposium on Sediment Management, Lille, 9 au 11 juillet 2008, 507-514.

CI 42. F. Larrarte, P. François, (2008), On the influence of suspended solids on ultrasonic beams – application to wastewaters, 14th International Conference on Transport and Sedimentation of Solid Particles, St Petersburg, 23 au 25 juin 2008.

CI 43. F. Larrarte, L-M. Cottineau, (2008), Experimental investigation of solids and velocities within sewers, 14th International Conference on Transport and Sedimentation of Solid Particles, St Petersburg, 23 au 25 juin 2008.

CI 44. V. Ruban, F. Rodriguez, J-M. Rosant, F. Larrarte, C. Joannis, P. Mestayer, H. Andrieu, (2007), Hydrologic and energetic experimental survey of a small urban watershed, 6th International Conference on sustainable techniques and strategies for urban water management, Novatech 2007, 25 au 28 juin 2007, Lyon, Tome 3, 1189-1196.

CI 45. H. Bonakdari, F. Larrarte, C. Joannis, (2007), Effect of a bend on the velocity field in a circular sewer with free surface flow, 6th International Conference on sustainable techniques and strategies for urban water management, Novatech 2007, 25 au 28 juin 2007, Lyon, TTome 3, 1401-1408.

CI 46. J.B. Bardiaux, J. Vazquez, R. Mosé, H. Bonakdari, F. Larrarte, (2007), Assessment of velocity fields through open-channels: creation of empirical laws., 6th International Conference on sustainable techniques and strategies for urban water management, Novatech 2007, 25 au 28 juin 2007, Lyon, Tome 3, 1441-1448.

CI 47. H. Bonakdari, F. Larrarte, (2006), Experimental and numerical investigation on self-cleansing and shear stress in sewers, Sewer Operation and Maintenance, Wien, October 26-27, 19-26.

CI 48. H. Bonakdari, F. Larrarte, (2006), Experimental and numerical study of the shear stress in narrow compound channel, Conference on Turbulence and Interactions, 29 May – 2 juin, Porquerolles, actes sur CD.

CI 49. H. Bonakdari, F. Larrarte, J-B. Bardiaux, (2006), Experimental and computational study of velocity fields in narrow or compound section sewers, 7th International Conference on Urban Drainage Modelling, Melbourne, 3-7 Avril 2006, 169-176.

CI 50. F. Larrarte, J-B. Bardiaux, H. Bonakdari, (2005), Computational and experimental study of velocity profiles in sewers, 10th International Conference on Urban Drainage, Copenhagen/Denmark, 21-26 August 2005, actes sur CD.

CI 51. F. Larrarte, J-B Bardiaux, Ph Battaglia, (2005), Development of a testing procedures for acoustic Doppler flow-meters, 12th International Metrology Congress, Lyon, Juin 2005, actes sur CD.

CI 52. F. Larrarte, H. Bonakdari,, C. Joannis, (2004), How can CFD help for designing the implantation of sensors in sewers ?, 4th International Conference on Sewer Processes and Networks, Madeira, Novembre 2004, 275-282.

CI 53. F. Larrarte, J-B Bardiaux, Ph Battaglia.,(2004) Development of a testing procedure of the acoustic Doppler flowmeters., 4th International Conference on Sewer Processes and Networks, Madeira, Novembre 2004, 267-274.

CI 54. F. Larrarte, F. Lopez (2004), Estimating sampling errors of wastewater related to the isokineticity condition., 12th International Conference on Transport & Sedimentation of Solid Particles, September 20-24, 2004, Prague.

CI 55. F. Larrarte, P. Jaumouillié, C. Joannis, (2004), Computational Fluid Dynamics: an aid for designing the instrumentation of sewer sections. 5th International Conference on sustainable techniques and strategies for urban water management Novatech 2004, Lyon, 6 au 10 juin 2004, Tome 1, 729-736.

CI 56. V. Ruban, F. Larrarte, M. Berthier, L. Favreau, Y. Sauvourel, L. Letellier, M.L. Mosini, G. Raimbault, Bilan hydrologique quantitatif et qualitatif à l'exutoire d'un petit bassin versant périurbain en région nantaise, 5th International Conference on sustainable techniques and strategies for urban water management Novatech 2004, Lyon, 6 au 10 juin 2004, Tome 1, 129-136.

CI 57. F. Larrarte, L-M. Cottineau, D. Bellefleur, (2003), 2D velocity and concentration samplers for particle laden flows. Eurosensors 17, Guimarães, Portugal ,21 – 24 Septembre 2003, 1015-1018.

CI 58. P. Jaumouillié, F. Larrarte, (2003), Experimental and numerical investigations of influence of the turbulent shear stress on the sedimentation in sewers. European Fluid Mechanics Conference, Toulouse, 24-28 aout 2003, page 345.

CI 59. P. Jaumouillié, F. Larrarte, (2003), Developpement of A 2D sampler, EUROMECH 447, Interaction phenomena in turbulent particle-laden flows, June 18-20, 2003, Tallin, Estonia, 53.

CI 60. P. Jaumouillié, F. Larrarte, (2002), Experimental studies of settling velocities of suspended solids in sewers, 11th International Conference on Transport and Sedimentation of Solid Particles, Septembre 2002, Gand, Belgique, 383-390.

CI 61. P. Jaumouillié, F. Larrarte, V. Milisic (2002), New devices for 2D sampling of velocities and pollutant concentrations in sewers, 3rd International Conference on sewer process and networks, Paris, April 2002, page 171-178.

CI 62. P. Jaumouillié, F. Larrarte, (2001), Effects of concentration profiles on velocity profiles in sewer, Euromech colloquium 421, Grenoble, Septembre 2001, 1 p.

CI 63. P. Jaumouillié, F. Larrarte, V. Milisic (2001), Numerical and experimental investigations of the pollutants fluxes in sewers, Novatech 2001, 4th International Conference on Innovative Technologies in Urban Storm Drainage, Lyon, 195-204.

CI 64. F. Larrarte, O. Boumatar, C. Joannis, (2001), Development of a testing procedure of the acoustic Doppler flowmeters, Novatech 2001, 4th International Conference on Innovative Technologies in Urban Storm Drainage, Lyon, Lyon, 187-194.

CI 65. F. Larrarte, J-P Legendre, Y. Sauvourel, J-M Paul, A. Grosseau, (2000), Designing a 2D sampler of suspended solids in sewer, 10th International Conference on Transport and Sedimentation of Solid Particles, Septembre 2000, Wroclaw, Pologne, 227-237.

CI 66. F. Larrarte, P. Labbé, (2000), Field investigation of flow velocities in sewers, 1st World Congress at the International Water Association, Paris, 3-7 July 2000.

CI 67. T.M. Pham, F. Larrarte, D.H. Fruman, (1998), Investigation of unstable cloud cavitation., 3rd Symposium on Cavitation, April 1998, Grenoble

CI 68. F. Larrarte, A. Pauchet, P. Bousquet, D.H. Fruman, (1995), On the morphology of natural and ventilated cavities., Cavitation and Multiphase Flow Forum, ASME - FED, Hilton Head Island.

Appendix 2.5 : National congresses.

CN 1. Rodriguez, R., Balou, D., Varéa, E., Murzyn, F., Mehel, A., Patte-Rouland, B. and Larrarte, F. (2018) Correction des erreurs statistiques aléatoire et systématique par une nouvelle méthode de traitement LDV. Application aux écoulements de sillage d'un corps d'Ahmed, 16ème Congrès Francophone de Techniques Laser (CFTL), Dourdan, 17-21 septembre (http://www.afvl.fr/cftl/2018/Book-CFTL2018.pdf).

CN 2. C. Chevalier, F. Larrarte, F. Schmidt, D. Pham-Van-Bang, E. Durand, P. Gondret, S. De La Roque, M Cheetham, M. Hosseingholian, (2018), Projet ANR SSHEAR : développements récents sur la compréhension et la maitrise des risques d'affouillements, Journées Nationales de Géotechnique et de Géologie de l'Ingénieur – Champs-sur-Marne 2018

CN 3. R. Rodriguez, F. Murzyn, A. Mehel, F. Larrarte, (2017), Experimental study of the wake flow behind three road vehicle models, 23ème Congrès Français de Mécanique, Lille, 28 au 1er Septembre 2017.

CN 4. A Belleville, G. Pierrefeu, J. Le Coz, F. Larrarte, P. Marchand, M. Pinatton, B. Augeard, P.-M. Bechon, D. Besson, P. Chisne, G. Dramais, C. Josserand, S. Poligot-Pitsch, R. Puechberty, (2017), Hydrométrie et normalisation, Congrès SHF : «Hydrométrie 2017, Lyon 14-15 mars 2017.

CN 5. F. Larrarte, M. Dufresne, E Mignot, G Lipeme Kouyi, N Rivière, J Vazquez, C Joannis, (2017), Débitmètrie et mécanique des fluides numérique : contribution à l'évaluation et à la réduction des incertitudes des mesures de vitesse moyenne., Congrès SHF : «Hydrométrie 2017, Lyon 14-15 mars 2017.

CN 6. F. Larrarte, S. Vareilles, M. Dufresnes, N. Rivière, M.N. Pons, G. Lipeme Kouyi, C. Joannis, R. Claverie, G. Chebbo, B. Riochet, K. Wouter Wasiak, R. Visiedo, L. Solliec, (2013), MENTOR ou une méthodologie et des outils opérationnels de conception et de qualification de sites de mesures en réseau d'assainissement, 92ème Congrès de l'ASTEE, Nantes, 4-7 juin.

CN 7. F. Larrarte, M.-N. Pons, B. Riochet, (2013), Biofilms en réseau d'assainissement, 92ème Congrès de l'ASTEE, Nantes, 4-7 juin.

CN 8. L. Gourmelen, L.-M. Cottineau, F. Larrarte, (2010) Développement d'un dispositif de mesure en continu de la hauteur de sédiments, Journées Génie Civil Génie Côtier, Les Sables d'Olonnes, Juin 2010, 477-484.

CN 9. E. Le Barbu, F. Larrarte, (2010), Profileurs acoustiques : un nouveau pas vers la connaissance des flux de polluants en assainissement urbain, Journées Génie Civil Génie Côtier, Les Sables d'Olonnes, Juin 2010, 513-520.

CN 10. F. Larrarte, E. Le Barbu, (2009), Profileurs acoustiques : un nouveau pas vers la connaissance des flux de polluants en assainissement urbain, XXVIIiemes Rencontres Universitaires de Génie Civil 2009 – Saint Malo 3-5 juin, actes sur CD, 19 .

CN 11. J. Le Coz, F. Larrarte, G. Saysset, G. Pierrefeu, (2008), Mesures hydrologiques par profileur à effet Doppler (aDcp) en France : application aux cours d'eau et aux réseaux urbains, SHF : «Mesures hydrologiques et incertitudes», Paris, 1-2 avril 2008.

CN 12. H. Bonakdari, F. Larrarte, C. Joannis, D. Levacher, (2007), Une méthodologie d'aide à l'implantation de débitmètres en réseaux d'assainissement, XXViemes Rencontres Universitaires de Génie Civil 2007 - Bordeaux 23-25 mai, actes sur CD.

CN 13. H. Bonakdari, F. Larrarte, C. Joannis, (2007), Profils de vitesses dans les couches limites turbulentes, Journées de l'Hydrodynamique, Brest, 215-227. .

CN 14. F. Larrarte, H. Bonakdari, C. Joannis, D. Levacher, (2006), Modéliser pour mesurer : application à la débitmétrie en collecteur d'assainissement, Journées techniques Sciences de l'Ingénieur 2006, Décembre 2006, actes sur CD.

CN 15. F. Larrarte, H. Bonakdari, C. Joannis, D. Levacher, (2006), Effets d'une déviation sur les champs de vitesses en réseaux d'assainissement, 2èmes Journées des Doctorants en hydrologie urbaine, Nantes, 17-18 octobre 2006.

CN 16. F. Larrarte, H. Bonakdari, C. Joannis, (2006), Etude expérimentale et numérique du taux de cisaillement en réseaux d'assainissement, IXèmes Journées Nationales de Génie Côtier - Génie Civil, 12-14 septembre 2006, Brest, sessions VI et VII, 42-49.

CN 17. H. Bonakdari, F. Larrarte, (2006), Effet des caractéristiques d'un coude sur l'écoulement en réseaux d'assainissement, XXIViemes Rencontres Universitaires de Génie Civil 2006 - La Grande Motte les 1 et 2 Juin, actes sur CD.

CN 18. J-B. Bardiaux, H. Bonakdari, F. Larrarte, R. Mose, J. Vazquez, (2006), Velocity profiles through a sewer channel using CFD to obtain velocity fields, Annual Conference on Hydraulic Engineering, Dresden 2006, 9 - 10 mars, Dresden, actes sur CD.

CN 19. F. Larrarte, J-B Bardiaux, Ph Battaglia, C. Joannis, (2005), Vélocimétrie Doppler : mise au point d'un protocole d'essai en laboratoire, Conférence sur l'autosurveillance, le diagnostic permanent et la modélisation des flux polluants en réseaux d'assainissement urbains, Marne-la-Vallée, 28 et 29 juin 2005, 171-180.

CN 20. F. Larrarte, L-M Cottineau, (2005), Développement d'un échantillonneur des flux polluants en réseau d'assainissement, XXIIIiemes Rencontres Universitaires de Génie Civil 2005 - Risque & Environnement, Grenoble, 26-27 mai.

CN 21. H. Bonakdari, F. Larrarte, (2005), La mécanique des fluides numérique comme outil de positionnement d'un débimètre dans un réseau d'assainissement, XXIIIiemes Rencontres Universitaires de Génie Civil 2005 - Risque & Environnement, 26-27 mai, Grenoble, version clé USB..

CN 22. F. Larrarte, L-M Cottineau, (2004), Nouveaux instruments pour la connaissance des champs de vitesses et de concentrations. VIIIèmes Journées Nationales Génie Côtier - Génie Civil, Compiègne 2004, 475-482.

CN 23. F. Larrarte, L-M. Cottineau , (2004), Echantillonnage 2D des flux polluants, Colloque Interdisciplinaire en Instrumentation, Cachan, 29-30 janvier 2004, 497-504.

CN 24. F. Larrarte, L-M. Cottineau, P. Jaumouillié, (2003), Outils pour la connaissance des champs de vitesses et de concentrations en collecteur d'assainissement, Journées techniques Sciences de l'Ingénieur 2003, Dourdan, Décembre 2003, 321-326.

CN 25. P. Jaumouillié, F. Larrarte, (2003), Etude des conditions de représentativité des prélèvements de matières solides en suspensions. 16ème Congrès Français de Mécanique, Nice, 1-5 septembre 2003, 885-890.

CN 26. F. Larrarte, J-P. Legendre, B. Phelippot, J-M Paul, F. Marc, A. Grosseau, (2001), Relevés télécommandés de profils de vitesses en collecteur d'assainissement, 15ème Congrès Français de Mécanique, Nancy, Septembre 2001, actes sur CD.

CN 27. F. Larrarte, J.P. Legendre, Y. Sauvourel, F. Gomin, R. Simon, (2000), Vélocimétrie Doppler : mise au point d'un protocole d'essai en laboratoire et observations in situ, Colloque SHF - GRAIE Autosurveillance et mesures en réseau d'assainissement., 5-6 décembre 2000, Lyon, 161-168.

CN 28. F. Larrarte, B. Riochet, P. Jaumouillié, J.P. Legendre, B. Parent, Y. Sauvourel, (2000), Création d'une base de données expérimentales sur les flux polluants dans un collecteur d'assainissement, SHF - GRAIE Autosurveillance et mesures en réseau d'assainissement., 5-6 décembre 2000, Lyon, 213-216.

CN 29. F. Larrarte, J-P. Legendre, J-M Paul, A. Grosseau, (1999), Développement d'un dispositif de prélèvement 2D en réseaux d'assainissement, 14ème Congrès Français de Mécanique - Toulouse - 30 août au 3 septembre 1999, 493-498.

CN 30. F. Larrarte, T. Hino, (1997), Nouveaux développements sur les profils de vagues., 13ème Congrès Français de Mécanique, Poitiers, septembre.

CN 31. F. Larrarte, T. Takahashi, H. Kawashima, (1997), Injection d'air sous une carène et réduction de la traînée., 6ème Journées de l'Hydrodynamique, Nantes.

CN 32. F. Larrarte, A. Pauchet, P. Bousquet, D.H. Fruman, (1995), Etude de la morphologie des interfaces des cavités naturelles et ventilées., 6eme Colloque National de Visualisation et de Traitement d'Images, Saint Etienne.

CN 33. F. Larrarte, A. Pauchet, P. Bousquet, K. Bonhoff, (1995), Etude de la morphologie des interfaces des cavités naturelles et ventilées., 5ème Journées de l'Hydrodynamique, Rouen.

CN 34. F. Larrarte (1995), Experimental study of waves profiles along a hull, 4th Symposium on nonlinear and free surface flows, Hiroshima (Japon), 19&20 octobre 1995.

CN 35. F. Larrarte, (1993), Etude des profils de vagues générées par des carènes : influence du dièdre d'étrave., 11ème Congrès Français de Mécanique, Lille.

CN 36. F. Larrarte, (1993), Etude numérique et expérimentale des profils de vagues générées par des carènes, 4ème Journées de l'Hydrodynamique, Nantes.