

## EQUIPE HYDEE

Nom de de l'équipe : Hydrodynamique et Ecoulements Environnementaux

Acronyme : HYDEE

Responsables d'équipe pour le contrat en cours : Anthony BEAUDOIN (2017-2020), Laurent DAVID (2015-2019) et Gérard PINEAU (2020), Sébastien JARNY (2015-2017)

Responsable d'équipe pour le contrat à venir : Gérard PINEAU

## I -PRODUCTION DE CONNAISSANCES ET ACTIVITÉS CONCOURANT AU RAYONNEMENT ET À L'ATTRACTIVITÉ SCIENTIFIQUE DE L'UNITÉ ET DE CHAQUE ÉQUIPE / THÈME

### 1- Journaux / Revues<sup>4</sup>

#### Articles scientifiques (62). <sup>5</sup>

#### Les 20% les plus significatifs

##### 2015

ACL.B01.1. *T. Jardin, L. David*, 2015: Coriolis effects enhance lift on revolving wings. *Phys. Rev. E* 91, Iss. 3, 031001 (R) <http://dx.doi.org/10.1103>

##### 2016

ACL.B01.2. *C. Caplier, G. Rousseaux, D. Calluad, L. David*, 2016 : Energy distribution in ship wakes from a spectral analysis of the wave field : the deep and shallow water cases. *Physics of Fluids*, 28, 107104 <https://doi.org/10.1063/1.4964923>

ACL.B01.3. *L.-P. Euvé, F. Michel, R. Parentani, T. Philbin and G. Rousseaux*, Observation of noise correlated by the Hawking effect in a water tank. *Physical Review Letters*, Volume 117, Issue 12, 121301, September 2016 <https://doi.org/10.1103/PhysRevLett.117.121301>

ACL.B01.4. *J.M.R. Gorle, L. Chatellier, F. Pons, M. Ba*, 2016: Flow and performance analysis of H-Darrieus hydro turbine in a confined flow: A computational and experimental study. *Journal of Fluids and Structures*, 66, pp 382–402 <https://doi.org/10.1016/j.jfluidstructs.2016.08.003>

##### 2018

ACL.B01.5. **Beaudoin A., Huberson S., De Dreuzy J. R.**, Adapting particle methods to model the dynamics of concentration gradients and chemical reactivity under advective diffusive transport conditions. *Journal of Computational Physics*, vol. 354, pp. 196-210, 2018. <https://doi.org/10.1016/j.jcp.2017.10.037>

ACL.B01.6. *Berchet, A., Simon, B., Beaudoin, A., Lubin, P., Rousseaux, G., and Huberson, S.* 2018. "Flow Fields and Particle Trajectories beneath a Tidal Bore: A Numerical Study," *International Journal of Sediment Research* (33:3), *International Journal of Sediment Research*, Elsevier BV, pp. 351–370. <https://doi.org/10.1016/j.ijsrc.2018.03.001>

ACL.B01.7. *R. Ben Salah, O. Alata, B. Tremblais, L. Thomas, L. David*, 2018: Tomographic reconstruction of 3D Objects using Marked Point Process framework. *Journal of Mathematical Imaging and Vision*, 17 pages. *Projet Européen AFDAR, CPER-FEDER* <https://doi.org/10.1007/s10851-018-0800-6>

ACL.B01.8. **Y.J. Jeon, G. Gomit, T. Earl, L. Chatellier, L. David**, 2018: Sequential least-square reconstruction of instantaneous pressure field around a body from TR-PIV. *Experiments in Fluids*, 59: 27,15 pages. *Projet Européen NIOPLEX, CPER*, <https://doi.org/10.1007/s00348-018-2489-0>

<sup>4</sup> Doctorant (souligné), chercheur PPRIME (gras), partenaire indus. (pointillés), partenaire acad. (italique)

- ACL.B01.9. Suzuki T., Chatellier L., Jeon YJ., David L., 2018 : Unsteady pressure estimation and compensation capabilities of the hybrid simulation combining PIV and DNS. Measurement, Science and Technology Volume 29, Number 12, pp, Projet Européen FP7 NIOPLEX <https://doi.org/10.1088/1361-6501/aae6b7>

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**2019**

- ACL.B01.10. Ballu, A., Pineau, G., Calluau, D., and David, L. 2019. "Experimental-Based Methodology to Improve the Design of Vertical Slot Fishways," Journal of Hydraulic Engineering 145. [https://doi.org/10.1061/\(ASCE\)HY.1943-7900.0001621](https://doi.org/10.1061/(ASCE)HY.1943-7900.0001621)
- ACL.B01.11. Gotle, J. M. R., Chatellier, L., Pons, F., and Ba, M. 2019. "Modulated Circulation Control around the Blades of a Vertical Axis Hydrokinetic Turbine for Flow Control and Improved Performance," Renewable and Sustainable Energy Reviews 105, pp. 363-377. <https://doi.org/10.1016/j.rser.2019.02.007>

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**2020**

- ACL.B01.12. Devaux, Y., Thomas, L., Calluau, D., and Pineau, G. 2020: Isolated Columnar Vortex Generation: Influence of Momentum Impulsion Characteristics and Wall Roughness, Fluid Dynamics Research:101294, <https://doi.org/10.1088/1873-7005/ab7ebf>

**Les 80% restants**


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**2015**

- ACL.B01.13. T. A. Earl, S. Cochard, L. Thomas, B. Tremblais & L. David, 2015 : Implementation of vibration correction schemes to the evaluation of a turbulent flow in an open channel by tomographic particle image velocimetry. Meas. Sci. Technol., 015303:1-19 <http://dx.doi.org/10.1088/0957-0233/26/1/015303>
- ACL.B01.14. T. Tronchin, L. David and A. Farcy, 2015: Evaluation of pressure field and fluid forces for 3D flow around flapping wing. Experiments in Fluids, Vol. 56:1, 7 (16 pages). <http://dx.doi.org/10.1007/s00348-014-1870-x>
- ACL.B01.15. M. Samson, T. Monnet, A. Bernard, P. Lacouture, L. David, 2015: The role of the entry-and-stretch phase at the different paces of race in front crawl swimming. Journal of Sports Sciences, 33(15):1535-1543 <http://dx.doi.org/10.1080/02640414.2014.1003584>
- ACL.B01.16. S. Im, Y. J. Jeon, H. J. Sung, 2015: Tomo-PIV measurement of flow around an arbitrarily moving body with surface reconstruction. Experiments in Fluids (2015) 56:25, <http://dx.doi.org/10.1007/s00348-015-1902-1>
- ACL.B01.17. S. Raynal, L. Chatellier, D. Courret, M. Larinier, L. David, 2015: Study on fish-friendly inclined and angled trashracks. La Houille Blanche , 3:31-36 <http://dx.doi.org/10.1051/lhb/20150030>
- ACL.B01.18. F. J W A Martins, J. M. Foucaut, L. Thomas, L. F A Azevedo and M. Stanislas, 2015. Volume reconstruction optimization for tomo-PIV algorithms applied to experimental data. Measurement Science and Technology, 26 (2015) 085202 (17pp). <http://dx.doi.org/10.1088/0957-0233/26/8/085202>
- ACL.B01.19. G. Gomit, L. Chatellier, D. Calluau, L. David, R. Boucheron, D. Frechou, O. Perelman, C. Hubert, 2015: Large scale free surface measurement for the analysis of ship waves in a towing tank. Experiments in Fluid, Vol. 56-10, 13 pages. <http://dx.doi.org/10.1007/s00348-015-2054-z>
- ACL.B01.20. M. Samson, T. Monnet, A. Bernard, P. Lacouture, L. David, 2015 : Hydrodynamic parameters in front crawl at different paces of swimming , Journal of Biomechanics <http://dx.doi.org/10.1016/j.jbiomech.2015.07.034>
- ACL.B01.21. R. Leroux, L. Chatellier & L. David, 2015 : Maximum likelihood estimation of missing data applied to flow reconstruction around NACA profiles. Fluid Dynamics Research, Vol.47, n°5, 23 pages, Projet Européen FP7 AFDAR, <http://dx.doi.org/10.1088/0169-5983/47/5/051406>
- ACL.B01.22. L.-P. Euvé, F. Michel, R. Parentani & G. Rousseaux, 2015 : Wave blocking and partial transmission in subcritical flows over an obstacle. PHYSICAL REVIEW D, 91(024020):1-12 <https://doi.org/10.1103/PhysRevD.91.024020>

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**2016**

- ACL.B01.23. A. Berchet, A. Beaudoin and S. Huberson, Divergence free condition in transport simulation, Comptes Rendus Mécanique, 2016 <https://doi.org/10.1016/j.crme.2016.02.007>
- ACL.B01.24. Dambrine J., Pierre M., Rousseaux G., A Theoretical and Numerical Determination of Optimal Ship Forms based on Michell's Wave Resistance ESAIM: Control, Optimisation and Calculus of Variations, vol. 22, pp. 1-27, 2016 <https://doi.org/10.1051/cocv/2014067>
- ACL.B01.25. T. Earl, Y.J. Jeon, B. Lecordier and L. David, 2016: F2DPR: A fast and robust cross-correlation technique for volumetric PIV. Measurement Science and Technology, 27, 084007 (15pp), Projet Européen FP7 NIOPLEX <http://dx.doi.org/10.1088/0957-0233/27/8/084007>

- ACL.B01.26. *Maissa P., Rousseaux G., Stepanyants Y.* Wave blocking phenomenon of surface waves on a shear flow with a constant vorticity. *Physics of fluids*, vol. 28, pp. 032102-1-032102-18, 2016 <https://doi.org/10.1063/1.4942116>
- ACL.B01.27. *Maissa P., Rousseaux G., Stepanyants Y.* Negative energy waves in a shear flow with a linear profile. *European journal of mechanics - b/fluids*, vol. 56, pp. 192-199, 2016 <https://doi.org/10.1016/j.euromechflu.2016.01.003>
- ACL.B01.28. *Cédric Peloquin, Léo-Paul Euvé, Thomas Philbin and Germain Rousseaux.* Analogue Wormholes and Black Hole LASER Effect in Hydrodynamics. *Physical Review D*, Volume 93, Issue 08, 084032-1/12, April 2016 <https://doi.org/10.1103/PhysRevD.93.084032>
- ACL.B01.29. **G. Rousseaux, J.-M. Mougenot, L. Chatellier, L. David & D. Calluud**, 2016: A novel method to generate tidal-like bores in the laboratory. *European Journal of Mechanics – B/Fluids* Volume 55, Part 1, pp 31-38 <http://dx.doi.org/10.1016/j.euromechflu.2015.08.00>

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**2017**

- ACL.B01.30. **A. Ballu, D. Calluud, G. Pineau, L. David, 2017.** Experimental study of the influence of macro-roughnesses on Vertical Slot Fishway flow. *La Houille Blanche*, n° 2, p. 9-14. <http://dx.doi.org/10.1051/lhb/2017011>
- ACL.B01.31. *Churilov, S. Ermakov, A. Rousseaux G., Stepanyants Y.* Scattering of long water waves in a canal with suddenly changed cross-section in the presence of a current, *Physical Review Fluids*, Volume 2, Issue 9, pp. 094805, 2017 <https://doi.org/10.1103/PhysRevFluids.2.094805>
- ACL.B01.32. *Euvé L.-P. and Rousseaux G.* Classical analogue of an interstellar travel through a hydrodynamic wormhole. (PRD Kaleidoscope Select). *Physical Review D*, Volume 96, Issue 6, pp. 064042-1/15, 2017 <https://doi.org/10.1103/PhysRevD.96.064042>
- ACL.B01.33. **Foucault E., Huberson S., Braud P., Coisne D.** On the pulsatile flow through a coronary bifurcation with stent. *European Journal Of Mechanics - B/Fluids*, vol. 61, pp. 177-186, 2017 <https://doi.org/10.1016/j.euromechflu.2016.11.007>
- ACL.B01.34. *Goerle J. M. R., Chatellier L., Pons F., Ba M.,* Operation of Darrieus turbines in constant circulation framework. *Physics Of Fluids*, vol. 29, pp. 1-14, 2017 <https://doi.org/10.1016/j.rser.2019.02.007>
- ACL.B01.35. *T. Jardin, L. David,* 2017: Root effects on the aerodynamics of low aspect ratio revolving wings. *AIAA Journal*. Vol. 55, No. 8, pp. 2717-2726, <http://dx.doi.org/10.2514/1.J054864>
- ACL.B01.36. *M. Samson, A. Bernard, T. Monnet, P. Lacouture, L. David,* 2017: Unsteady Computational Fluid Dynamics in front crawl swimming. *Computer Methods in Biomechanics and Biomedical Engineering*, Vol 20, Issue 7, 783-793, <http://dx.doi.org/10.1080/10255842.2017.1302434>
- ACL.B01.37. *M. Samson, A. Bernard, T. Monnet, P. Lacouture, L. David,* 2017: Unsteady forces on a hand in swimming in impulsive start configuration. *Computer Methods in Biomechanics and Biomedical Engineering*, Vol . 20, S1, S187–S188, <https://doi.org/10.1080/10255842.2017.1382925>
- ACL.B01.38. *Tarhini Z., Jarny S., Texier A.* Viscoplastic properties of laponite-CMC mixes. *DATA IN BRIEF*, vol. 11, pp. 581-587, 2017 <https://doi.org/10.1016/j.dib.2017.02.002>
- ACL.B01.39. *P. Van Gent, D. Michaelis, B. van Oudheusden, P-E Weiss, R. de Kat, A. Laskari, Y. J. Jeon, L. David, D. Schanz, F. Huhn, S. Gesemann, M. Novara, C. McPhaden, N. Neeteson, D. Rival, J. FG Schneiders, F. Schrijer,* 2017: Comparative assessment of PIV/PTV-based pressure reconstruction techniques applied to a transonic base flow. *Experiments in Fluids*, 58: 33, 23 pages, *Projet Européen FP7 NIOPLEX* <http://dx.doi.org/10.1007/s00348-017-2324-z>

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**2018**

- ACL.B01.40. *Dartois A., Beaudoin A., Huberson S.,* 2018: Impact of local diffusion on macroscopic dispersion in three-dimensional porous media. *Comptes Rendus Mécanique*, vol. 346, pp. 89-97. ANR H2OMNO4, <https://doi.org/10.1016/j.crme.2017.12.012>
- ACL.B01.41. *Dewitte M., David L., Kampa E., Coeck J.,* 2018: The FiHydro project : an european initiative for a sustainable and fish-friendly hydropower. *La Houille Blanche* n° 4, 2018, p. 77-79, *Projet Européen H2020 FiHydro*, <https://doi.org/10.1051/lhb/2018045>
- ACL.B01.42. **G. Gomit, G. Acher, L. Chatellier, and L. David,** 2018: Uncertainty analysis of an optical method for pressure estimation in fluids. *Measurement, Science and Technology*, Vol. 29, 2, 024004. ANR DGA EVAPOR. <https://doi.org/10.1088/1361-6501/aa99c0>
- ACL.B01.43. *S. Hamidouche, D. Calluud, G. Pineau, A. Texier,* 2018 : Study of instantaneous flow behind a single fixed ripple. *Journal of Hydro-environment Research* 19, 117–127 <https://doi.org/10.1016/j.jher.2018.03.002>
- ACL.B01.44. *R. Leroux, L. Chatellier, L. David,* 2018: Time resolved flow reconstruction with indirect measurements using regression models and Kalman filtered POD ROM. *Experiments in Fluids*, 59:16, 27 pages. *Projet Européen AFDAR, CPER-FEDER*, <https://doi.org/10.1007/s00348-017-2455-2>

- ACL.B01.45. **M. Samson, T. Monnet, A. Bernard, P. Lacouture, L. David**, 2018: Analysis of a swimmer's hand and forearm in unsteady flow conditions using computational fluid dynamics. *Journal of Biomechanics*, 67, 157–165. <https://doi.org/10.1016/j.jbiomech.2017.12.003>

## 2019

- ACL.B01.46. **Baker, N. T., Diaz, D., Bailly, D., David, L., and Monnier, J.-C.** 2019. "Mechanical vs. Phenomenological Formulations to Determine Mean Aerodynamic Drag from Stereo-PIV Wake Measurements," *Exp. Fluids* 60, *Exp. Fluids*. <https://doi.org/10.1007/s00348-019-2813-3>
- ACL.B01.47. **Beaudoin, A., Dartois, A., and Huberson, S.** 2019. "Analysis of the Influence of Averaged Positive Second Invariant  $Q(av)$  of Deformation Tensor  $Del U$  on the Maximum Dilution Index  $E-Max$  in Steady Darcy Flows through Isotropic Heterogeneous Porous Media," *Advances in Water Resources* 128, pp. 39–47, <http://dx.doi.org/10.1016/j.advwatres.2019.03.008>
- ACL.B01.48. **Caplier C., Rousseaux G., Callaud D., David L.**, 2019 : an experimental study of the effects of finite water depth and lateral confinement on ships wake and drag. *Journal of hydrodynamics*. <https://doi.org/10.1007/s42241-019-0054-9>
- ACL.B01.49. **Caplier, C., Gomit, G., Rousseaux, G., Callaud, D., Chatellier, L., and David, L.** 2019. "Calibrating and Measuring Wakes and Drag Forces of Inland Vessels in Confined Water in a Towing Tank," *Ocean Engineering* 186, p. 106134. <https://doi.org/https://doi.org/10.1016/j.oceaneng.2019.106134>
- ACL.B01.50. **Diaz D., David L., Pons F., Jardin T., Gourdain N.**, 2019. Study of flapping wings to identify best performance conditions. *Computer Methods in Biomechanics and Biomedical Engineering*, Volume 22, 2019 - Issue sup1 – S15-S17. <https://doi.org/10.1080/10255842.2019.1668135>
- ACL.B01.51. **Putra, Y. S., Beaudoin, A., Rousseaux, G., Thomas, L., and Huberson, S.** 2019. "2D Numerical Contributions for the Study of Non-Cohesive Sediment Transport beneath Tidal Bores," *Comptes Rendus Mécanique* 347, pp. 166–180. <https://doi.org/10.1016/j.crme.2018.11.004>
- ACL.B01.52. **Samson M., Monnet T., Bernard A., Lacouture P., David L.**, 2019: Comparative study between fully tethered and real swimming at different paces of swimming, in front crawl. *Sport Biomechanics*, Volume 18, - Issue 6, Pages 571-586 <https://doi.org/10.1080/14763141.2018.1443492>
- ACL.B01.53. **Samson M., Monnet T., David L.**, 2019. Highlighting the Kramer effect in swimming. *Computer Methods in Biomechanics and Biomedical Engineering*, Volume 22, 2019 - Issue sup1 – S337-S338. <https://doi.org/10.1080/10255842.2019.1668135>

## 2020

- ACL.B01.54. **Suzuki, T., Chatellier, L., and David, L.**, A Few Techniques to Improve Data-Driven Reduced-Order Simulations for Unsteady Flows, *Computers and Fluids* 201, 2020 <https://doi.org/https://doi.org/10.1016/j.compfluid.2020.104455>
- ACL.B01.55. **L. Biasiori-Poulanges, S. Jarny, H. El-Rabii**, Data on eosin Y solutions for laser-induced fluorescence in water flows, *Data in Brief*, 29:105350, 2020 <https://doi.org/10.1016/j.dib.2020.105350>
- ACL.B01.56. **Lemkecher, E., Chatellier, L., Courret, D., David, L.**, Contribution of different elements of inclined trash racks to head losses modelling, *Water* 12(966), 2020, <https://doi.org/10.3390/w12040966>
- ACL.B01.57. **Ramos Ortega, M., Beaudoin, A. and Huberson, S.** 2020 : Optimized SPH methods and validations, *International Journal for Numerical Methods in Fluids*, (Sous presse).
- ACL.B01.58. **Berchet, A., Beaudoin, A. and Huberson, S.** 2020 : Adaptive particle method based on moments for simulating the mass transport in natural flows, *Computational Particle Mechanics*, (Sous presse).
- ACL.B01.59. **Euvé, L.P., Robertson, S., James, N., Fabbri, A. and Rousseaux, G.** 2020 : Scattering of co-current surface waves on an analogue black hole. *Physical Review Letters*, Volume 124, Issue 14, 141101.
- ACL.B01.60. **Rousseaux, G. and Mancas, S.**, 2020 : Visco-elastic Cosmology for a Sparkling Universe ? *General Relativity and Gravitation*, Volume 52, Issue 6, Article 55.
- ACL.B01.61. **Rousseaux, G. and Kellay, H.**, 2020 : Classical Hydrodynamics for Analogue Spacetimes: Open Channel Flows and Thin Films. *Philosophical Transactions of the Royal Society A*, *Philosophical Transactions of the Royal Society A*, Volume 378, Issue 2177, 20190233.
- ACL.B01.62. **Fourdrinoy, J., Dambrine, J., Petcu, M., Pierre, M. and Rousseaux, G.**, 2020: The dual nature of the dead-water phenomenology : Nansen versus Ekman wave-making drags, *Proceedings of the National Academy of Sciences* 117 (29), 16770-16775.

## 2- Ouvrages

Monographies, éditions critiques, traductions (5)

### Les 20% les plus significatifs

- OS.B01.1. **A. Texier**, 2015. *Petites histoires de la mécanique: des fondamentaux historiques aux bases de la mécanique moderne*. Editions Langlois Cécile, 174 pages. ISBN 979-10-93510-38-5

Direction et coordination d'ouvrages scientifiques / édition scientifique en anglais ou dans une autre langue étrangère

**Les 20% les plus significatifs**

- OS.B01.2. Fish in Hydropower Affected Rivers, 2020. Special Issue dans la section Water Quality and Ecosystems du journal Water (ISSN 2073-4441). Guest Editors Rutschmann P., Boes R., **David L.**, Pinheiro A.

Chapitres d'ouvrage en anglais ou dans une autre langue étrangère

**Les 20% les plus significatifs**

- OS.B01.3. Rousseaux, G. and Stepanyants, Y., : « Modeling of Bose–Einstein Condensation in a Water Tank. » p. 91-101, in *Nonlinear Waves and Pattern Dynamics* ». 229 pages (Springer International Publishing, 2018). Editors : Abcha, N., Pelinovsky, E. and Mutabazi, I.

**Les 80% restants**

- OS.B01.4. Chatellier, L., Gorle, J. M. R., Pons, F., & Ba, M., Towing Tank Testing of a Controlled-Circulation Darrieus Turbine," in *Advances in Renewable Energies Offshore* (1<sup>st</sup> ed.), C. G. Soares ed., Taylor and Francis Group, 2018 <https://doi.org/https://doi.org/10.1201/9780429505324>
- OS.B01.5. Costa, S., Chatellier, L., Pons, F., & Ba, M., Parametric Design of a Hydro-Elastic Energy Harvester, in *Advances in Renewable Energies Offshore* (1<sup>st</sup> ed.), C. G. Soares ed., Taylor and Francis Group, 2018 <https://doi.org/https://doi.org/10.1201/9780429505324>

### 3- Production dans des colloques / congrès, séminaires de recherche

#### Éditions ou coordination d'un volume d'actes de colloques / congrès

##### Les 20% les plus significatifs

- ACT.B01.1. L. David, 2015. Proceedings du workshop NIM2015 (136 pages), [http://nim2015.conference.univ-poitiers.fr/wp-content/uploads/sites/114/2014/04/nim2015\\_PROCEEDINGS\\_FINAL.pdf](http://nim2015.conference.univ-poitiers.fr/wp-content/uploads/sites/114/2014/04/nim2015_PROCEEDINGS_FINAL.pdf)

#### Articles publiés dans des actes de colloques / congrès (101)

##### Les 20% les plus significatifs

##### 2015

- ACT.B01.2. F Gibouin, S. Jarny, P. Monnet, J.C. Dupré, V. Valle, 2015 : On the determination of the rheo-optic law, 10th Annual European Rheology Conference, Nantes, April 14-17
- ACT.B01.3. Z. Tarhini, S. Jarny, A. Texier, 2015 : Rheology and local study of a transparent model cohesive sediment, 13th INTERCOH Conference, Leuven, September 7-11.

##### 2016

- ACT.B01.4. L. Thomas, W. Reichl, Y. Devaux, A. Beaudouin, L. David, 2016 : Experimental sediment transport in a tidal bore generated in a flume. Proceedings of the 4th IAHR Europe Congress (Liege, Belgium, 27-29 July 2016) Edited by Benjamin Dewals, CRC Press 2016, Pages 478-484 Print ISBN: 978-1-138-02977-4, eBook ISBN: 978-1-4987-8149-7, <http://dx.doi.org/10.1201/b21902-83>
- ACT.B01.5. A. Dartois, A. Beaudoin, J.R. de Dreuzy et S. Huberson, Impact de l'hétérogénéité des sols et de la diffusion moléculaire sur les macro dispersions longitudinale et transversale, 13 ème journée d'études des milieux poreux, JEMP2016, 12, 13 et 14 octobre 2016, Biarritz.
- ACT.B01.6. L.-P. Euvé et G. Rousseaux, Génération non-linéaire d'harmoniques après une conversion linéaire en interaction houle-courant. Proceedings des 14èmes Journées Génie Côtier Génie Civil à Toulon en Juillet 2016. Session d'Hydrodynamique Côtière, p. 29-38, Editions Paralia du C.F.L..Editeurs : Daniel Levacher, Martin Sanchez et Vincent Rey. ISBN 978-2-35921-017-0 [http://www.paralia.fr/jngcgc/14\\_04\\_euve.pdf](http://www.paralia.fr/jngcgc/14_04_euve.pdf)

##### 2017

- ACT.B01.7. A. Ballu, G. Pineau, D. Calluau, L. David, 2017: Characterization of the flow in a vertical slot fishway with macroroughnesses using unsteady (URANS and LES) simulations. E-proceedings of the 37th IAHR World Congress, August 13 – 18, 2017, Kuala Lumpur, Malaysia.
- ACT.B01.8. G. Gomit, G. Acher, L. Chatellier, L. David, 2017: Uncertainty analysis of an optical method for pressure estimation in fluids. 18ème Congrès International de Métrologie, 19-21 Septembre, 2017, Paris, France.
- ACT.B01.9. Héliot, J.-P.; Chatellier, L.; Caplier, C. & Pecault, S. 2017: V&V for Computational Fluid Dynamics of Multiple Parallel Jets Using a Hybrid RANS-LES Method in Fluent V&V 2017 ASME Verification And Validation Symposium, Las Vegas, May 3-5

##### 2018

- ACT.B01.10. G. Acher, L. Thomas, B. Tremblais, L. David, 2018: A new camera model combining a pinhole model and a discrete correction to overcome refractive index variation challenges. 19th International Symposium on Applications of Laser Techniques to Fluid Mechanics, Lisbon, Portugal, 15-18 July. ANR DGA EVAPOR
- ACT.B01.11. A. Baramili, L. Chatellier, L. David and L. Ancian, 2018: A simplified approach to estimate flow-induced vibrations on an elbowed piping system. ASME 2018 Pressure Vessels and Piping Conference– 15-20 juillet, Prague, Czech Republic. Contrat VIBRATEC
- ACT.B01.12. Devaux, Y.; Pineau, G.; Calluau, D. & Thomas, L. 2018: Experimental study of a vertical vortex propagating above a smooth wall 18th International Symposium of Flow Visualization, Zurich, June 26-29
- ACT.B01.13. F. Lemkecher, L. David, D. Courret, and L. Chatellier, 2018. Field measurements of the attractivity of bypasses for fishfriendly trashrack. Riverflow 2018, 5/8 septembre, Lyon. Projet Européen H2020 FITHYDRO
- ACT.B01.14. J. Fourdrinoy, L.-P. Euvé, J.-M. Mougenot et G. Rousseaux, 2018 : Générateur de houle à contre-courant via un déversoir oscillant. Proceedings des XVèmes Journées Nationales Génie Côtier – Génie Civil à La Rochelle en mai 2018. Session d'Hydrodynamique Côtière, p. -, Editions Paralia du C.F.L.. Editeurs : Daniel Levacher, Martin Sanchez, Xavier Bertin et Isabelle Brenon

- ACT.B01.15. M. Lo, A. Beaudoin et F. Compère, Evaluation des risques d'inondation et d'érosion des berges provoqués par le réchauffement climatique, 2<sup>e</sup> Journée thématique EAU – SCENARIO, 10 Juillet 2018, Poitiers
- ACT.B01.16. M. Ramos Ortega, A. Beaudoin and S. Huberson, AUDIT OF SPH METHODS TO BUILD A CODE OF COMPLEX FLOWS IN OPEN AND CLOSED SYSTEMS, 16<sup>èmes</sup> Journées de l'Hydrodynamique, 27-29 Novembre 2018, Marseille

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## 2019

- ACT.B01.17. Acher, G., Thomas, L., Tremblais, B., Gomit, G., Chatellier, L., and David, L. 2019. "Simultaneous Measurements of Flow Velocity Using Tomo-PIV and Deformation of a Flexible Wing," in 13<sup>th</sup> International Symposium on Particle Image Velocimetry (ISPIV2019), July 22-24, Munich, Germany
- ACT.B01.18. Caplier C., Gomit G., Rousseaux G., Calluau D., Chatellier L., David L, 2019 : Calibrating and measuring wakes and drag forces of inland vessels in confined water in a towing tank. 5<sup>th</sup> MASHCON, International Conference on Ship Manoeuvring in Shallow and Confined Water with non-exclusive focus on manoeuvring in waves, wind and current. 19 - 23 May 2019 Ostend, Belgium
- ACT.B01.19. Fourdrinoy J., Caplier C., Devaux Y., Rousseaux G., Dambrine J., Pierre M., Petcu M., Giani A., Zacharias I., Jouteur I. and Martin P. 2019. The Battle of Actium and the Myth of the Ship-Holder : the effect of bathymetry. Mashcon V : 5<sup>th</sup> International Conference on Ship Manoeuvring in Shallow and Confined Water, Ostend, Belgium. 19 - 23 May 2019.
- ACT.B01.20. Steinmann T., Casas J., Braud P., David L., 2019. Tomo-PTV measurement of a drop impact at air-water interface. 13<sup>th</sup> International Symposium on Particle Image Velocimetry-ISPIV19, Munich, Germany, July 22-24, 2019. ARC Tours-Poitiers
- ACT.B01.21. Samson M., Monnet T., David L., 2019. Highlighting the Kramer effect in swimming. 44<sup>ème</sup> Congrès de la Société de Biomécanique - Poitiers 28-30 octobre 2019

## Les 80% restants

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## 2015

- ACT.B01.22. F Gibouin, S. Jarny, P. Monnet, J.C. Dupré, V. Valle, 2015 : On the determination of the rheo-optic law, 10<sup>th</sup> Annual European Rheology Conference, Nantes, April 14-17
- ACT.B01.23. A. Ballu, G. Pineau, D. Calluau & L. David, 2015 : Experimental study of the influence of sills on vertical slot fishway flow. 36<sup>th</sup> IAHR World Congress, Den Haag, June 28 - July 3
- ACT.B01.24. A. Beaudoin, S. Huberson, 2015: Pressure Evaluation Method: Poisson equation coupled with SPH method. International Workshop of Non-Intrusive Measurements for aerodynamics and unsteady flows (NIM2015), Poitiers (France), 27-29 octobre 2015.
- ACT.B01.25. R. Ben Salah, O. Alata, B. Tremblais, L. Thomas, L. David, 2015. Particle volume reconstruction based on a marked point process and application to TomoPIV. Eupsico, Nice (France), september 2015
- ACT.B01.26. Y. Cao, E. Kaiser, J. Borée, B. R. Noack, L. Thomas, S. Guilain, 2015: Cluster-based analysis of Cycle-to-Cycle Variations - Application to internal combustion engines. International Workshop of Non-Intrusive Measurements for aerodynamics and unsteady flows (NIM2015), Poitiers (France), 27-29 octobre 2015.
- ACT.B01.27. C. Caplier, G. Rousseaux, D. Calluau, L. David, 2015. The effects of river counter-currents on ship wakes : an experimental approach. Congrès SHF : «Hydrodynamics and simulation applied to inland waterway and port approaches», Meudon 18-19 November 2015.
- ACT.B01.28. C. Caplier, G. Rousseaux, D. Calluau, L. David, 2015. An experimental study of the effects of finite water depth and lateral confinement on ship wake and drag. Congrès SHF : «Hydrodynamics and simulation applied to inland waterway and port approaches», Meudon 18-19 November 2015.
- ACT.B01.29. C. Caplier, G. Rousseaux, D. Calluau & L. David, 2015 : An experimental study of the effects of finite water depth and lateral confinement on ships wake and drag. 36<sup>th</sup> IAHR World Congress, Den Haag, June 28 - July 3
- ACT.B01.30. Dambrine J., Pierre M., Rousseaux G., Optimisation of ship hulls considered as slender-bodies., Congrès SHF « Hydrodynamics and simulation applied to inland waterways and port approaches », Meudon 18-19 November 2015., 2015, Meudon
- ACT.B01.31. L. David, L. Chatellier, D. Calluau, G. Rousseaux & L. Thomas, 2015 : Study Of Different Kind Of Tidal Bores In Laboratory. 36<sup>th</sup> IAHR World Congress, Den Haag, June 28 - July 3
- ACT.B01.32. T. Earl, Y.J. Jeon, B. Lecordier, L. David, 2015: Accuracy and speed assessment of 3D cross-correlation methods in homogeneous isotropic turbulence. 11<sup>th</sup> International Symposium on Particle Image Velocimetry-PIV15. Santa Barbara, California, September 14-16, 2015.
- ACT.B01.33. J.M.R. Gorle, L. Chatellier, F. Pons, M. Ba, 2015: PIV investigation of the flow across a Darrius water turbine. International Workshop of Non-Intrusive Measurements for aerodynamics and unsteady flows (NIM2015), Poitiers (France), 27-29 octobre 2015.

- ACT.B01.34. J. M. R. Gorle, L. Chatellier, F. Pons & M. Ba, 2015 : Critical Analysis of the Effectiveness of Blade Pitching for Vertical Axis Water Turbine. 11th European Wave and Tidal Energy Conference Series (EWTEC), Nantes, September 6-11
- ACT.B01.35. S. Jarny & P. Monnet, 2015 : Rheological properties of cohesive sediments from Garonne estuary. 13th INTERCOH Conference, Leuven, September 7-11
- ACT.B01.36. Y.J. Jeon, T. Jardin, L. David, 2015: Flow analysis of a flapping wing for symmetrical and assymetrical kinematics. International Workshop of Non-Intrusive Measurements for aerodynamics and unsteady flows (NIM2015), Poitiers (France), 27-29 october 2015.
- ACT.B01.37. Y.J. Jeon, L. Chatellier, T. Earl, L. David, 2015: Load evaluations from 3D velocity fields applied to the flapping flight. International Workshop of Non-Intrusive Measurements for aerodynamics and unsteady flows (NIM2015), Poitiers (France), 27-29 october 2015.
- ACT.B01.38. Y.J. Jeon, L. Chatellier, A. Beaudoin, L. David, 2015: Least-square reconstruction of instantaneous pressure field around a body based on a directly acquired material acceleration in time-resolved PIV. 11th International Symposium on Particle Image Velocimetry-PIV15. Santa Barbara, California, September 14-16, 2015.
- ACT.B01.39. R. Leroux, L. Chatellier, L. David, 2015: Time-resolved flow reconstruction using Kalman filtered and PLSR. International Workshop of Non-Intrusive Measurements for aerodynamics and unsteady flows (NIM2015), Poitiers (France), 27-29 october 2015.
- ACT.B01.40. V.T. Nguyen, B. Tremblais, F. Pons, L. David, 2015: Pressure evaluation by polynomial basis. International Workshop of Non-Intrusive Measurements for aerodynamics and unsteady flows (NIM2015), Poitie
- ACT.B01.41. M. Samson, T. Monnet, A. Bernard, P. Lacouture, L. David, 2015. Hydrodynamic angles, orientation and velocity of the hand in front crawl swimming. 33rd International Symposium of Biomechanics and Sports, Poitiers, Juillet 2015.
- ACT.B01.42. Z. Tarhini, S. Jarny, A. Texier, 2015 : Rheological characterization of a transparent model sediment, 10th Annual European Rheology Conference, Nantes, April 14-17
- ACT.B01.43. R. Ben Salah, O. Alata, B. Tremblais, L. Thomas, L. David, 2015: Reconstruction de volume de particules fondée sur un processus ponctuel marqué et application à la Tomo-PIV. 25ième GRETSI. 6 au 11 septembre, Lyon

## 2016

- ACT.B01.44. A. Ballu, D. Calluud, G. Pineau, L. David, 2016. Experimental study of the influence of macro-roughnesses on Vertical Slot Fishway flow. Hydropower and Environmental Sustainability, Grenoble, 16-17 mars 2016.
- ACT.B01.45. A. Baramili Fleury de Amorim, L. Chatellier, L. David, L. Ancian, 2016. Experimental and computational data assessment for vibration analysis in elbowed ducts conveying dense fluids. 11th International Conference on Flow-Induced Vibration, La Hague ( The Netherlands), 4th - 6th July 2016.
- ACT.B01.46. A. Beaudoin, J.R. de Dreuzy and S. Huberson, Transport equation for the concentration gradient, XXIV ICTAM, 21-26 August 2016, Montreal, Canada.
- ACT.B01.47. P. Blinde, D. Michaelis, R. de Kat, A. Laskari, Y.J. Jeon, L. David, D. Schanz, F. Huhn, C. McPhaden, D. Rival, P.E. Weiss, J. Schneiders, B. van Oudheusden, F. Schrijer, 2016. Comparative assessment of PIV-based pressure evaluation techniques. Part 2: application of techniques. 18th International Symposium on Applications of Laser Techniques to Fluid Mechanics, Lisbon, Portugal, 4-7 July, 2016.
- ACT.B01.48. T. Earl, Y.J. Jeon, C. Lacour, B. Lecordier, L. David, 2016. Spectral Improvement of Time Resolved PIV by FTEE in Homogeneous Isotropic Turbulence. 18th International Symposium on Applications of Laser Techniques to Fluid Mechanics, Lisbon, Portugal, 4-7 July, 2016.
- ACT.B01.49. Thomas Earl, Hong Phuc Dang, Gildas Lalizel, Eva Dorignac, Patrick Braud, Lionel Thomas, 2017: Tomographic PIV Measurements of an Inclined Heated Jet in Crossflow. 18th International Symposium on Applications of Laser Techniques to Fluid Mechanics, Lisbon, Portugal, 4-7 July, 2016.
- ACT.B01.50. Y.J. Jeon, T. Earl, P. Braud, L. Chatellier, L. David, 2016. 3D pressure field around an inclined airfoil by tomographic TR-PIV and its comparison with direct pressure measurement. 18th International Symposium on Applications of Laser Techniques to Fluid Mechanics, Lisbon, Portugal, 4-7 July, 2016.
- ACT.B01.51. D. Michaelis, P. Blinde, D. Neal, R.de Kat, A. Laskari, Y.J. Jeon, L. David, D. Schanz, F. Huhn, C. McPhaden, D. Rival, P.E. Weiss, J.FG Schneiders, B. vanOudheusden, F. Schrijer, 2016. 3D pressure visualization from 3D PIV /PTV: Comparative assessment. 17th International Symposium on Flow Visualization, Tennessee, USA, 19-22 June, 2016.
- ACT.B01.52. G. Acher, L. Chatellier, L. Thomas, B. Tremblais, L. David, 2016: Mesures couplées de vibrations d'aile et de forces en régime turbulent. 15ième CFTL, 13 au 16 septembre, Toulouse.
- ACT.B01.53. A. Beaudoin, J.R. de Dreuzy et S. Huberson, Équation de transport pour le gradient de concentration, SHF : «Les polluants émergents:de nouveaux défis pour la gestion des eaux souterraines 19-20 mai 2016, Orléans



- ACT.B01.54. R. Ben Salah, L. Thomas, B. Tremblais, O. Alata, L. David, 2016: Reconstruction de volumes de particules par processus ponctuels marqués. 15<sup>ième</sup> CFTL, 13 au 16 septembre, Toulouse.
- ACT.B01.55. Hong Phuc Dang, Thomas Earl, Patrick Braud, Gildas Lalizel, Lionel Thomas, Eva Dorignac, 2016: Etude de l'influence du taux de soufflage sur les structures cohérentes d'un jet débouchant inclinée dans un écoulement transverse cisailée, par Tomo-PIV, 15<sup>ième</sup> CFTL, 13 au 16 septembre, Toulouse
- ACT.B01.56. L. David, G. Gomit, A. Simonini, G. Rousseaux, L. Chatellier, D. Calluau, 2016: Etude comparative de deux modes de génération de mascaret par vélocimétrie par imagerie de particules résolues en temps et stéréo-réfraction. 15<sup>ième</sup> CFTL, 13 au 16 septembre, Toulouse.
- ACT.B01.57. Y. J. Jeon, T. Earl, P. Braud, L. Thomas, L. Chatellier, L. David, 2016: Mesures du champ de pression autour d'un Naca0015 par TomoPIV résolue en temps. 15<sup>ième</sup> CFTL, 13 au 16 septembre, Toulouse.
- ACT.B01.58. B. Lecordier, T. Earl, Y. J. Jeon, C. Lacour, L. David, 2016: Analyse spectrale d'une turbulence isotrope et homogène en PIV résolue en temps par FTEE. 15<sup>ième</sup> CFTL, 13 au 16 septembre, Toulouse.
- ACT.B01.59. Z. Tarhini, R. Bellanger, S. Jarny, A. Texier, Etude expérimentale d'érosion d'un sédiment modèle cohésif transparent, 14<sup>ème</sup> Journées Nationales Génie Côtier – Génie Civil, Toulon, 29 juin – 1er juillet 2016

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## 2017

- ACT.B01.60. G. Acher, L. Thomas, B. Tremblais and L. David, 2017: Analysis of turbulent flow around a 3D NACA0015 wing using StereoPIV and TomoPIV. 12th International Symposium on Particle Image Velocimetry-ISPIV17. 19-21 juin, Busan, Korea.
- ACT.B01.61. A. Baramili, L. Chatellier, L. David and L. Ancian, 2017: Elbow flow multi-section characterization using planar and Stereo-PIV. 12th International Symposium on Particle Image Velocimetry-ISPIV17. 19-21 juin, Busan, Korea.
- ACT.B01.62. P. Daher, C. Lacour, F. Lefebvre, A. Cessou, B. Tremblais, L. Thomas, L. David and B. Lecordier, 2017: Novel ex-situ calibration procedure for Tomographic PIV in a confined environment: application to a single-cylinder optical engine. 12th International Symposium on Particle Image Velocimetry-ISPIV17. 19-21 juin, Busan, Korea.
- ACT.B01.63. G. Gomit, L. Thomas, L. Chatellier, D. Calluau, L. David, B. Tremblais, M. Khoudeir, B. Bringier, J.C. Dupré, P. Morandi, P. Doumalin, F. Brémand, 2017: Development of optical methods for surface and volumetric measurements. 18<sup>ème</sup> Congrès International de Métrologie, 19–21 Septembre, 2017, Paris, France. <https://doi.org/10.1051/metrology/201715001>
- ACT.B01.64. Koulova, D.; Louste, C.; Euve, L. P. & Romat, H. 2017: Experimental study of electrically charged surface 19th IEEE International Conference on Dielectric Liquids <https://doi.org/10.1109/ICDL.2017.8124681>
- ACT.B01.65. T. Suzuki, YJ. Jeon, L. Chatellier, L. David, 2017: Comparison of unsteady pressure estimation based on time-series PIV. 12th International Symposium on Particle Image Velocimetry-ISPIV17. 19-21 juin, Busan, Korea.
- ACT.B01.66. L. Thomas, B. Tremblais, L. David, R. Ben Salah and O. Alata, 2017: Tomographic reconstruction of a particle cloud for tomo-PIV using a marked point process framework. 12th International Symposium on Particle Image Velocimetry-ISPIV17. 19-21 juin, Busan, Korea.
- ACT.B01.67. Tarhini, Z.; Jarny, S. & Texier, A. 2017: Local study of erosion with a transparent model cohesive sediment 14th INTERCOH Conference, Montevideo, November 13-17
- ACT.B01.68. A. Baramili, L. Chatellier, L. David, L. Ancian, 2017: Numerical and experimental evaluation of elbow flow of dense fluids at high Reynolds number. 23<sup>ième</sup> Congrès Français de Mécanique, 28 aout- 1er septembre, Lille.
- ACT.B01.69. A. Baramili, L. Chatellier, L. David, L. Ancian, 2017: Velocity and pressure fields correlation analysis for low-order modeling of the elbow flow. 23<sup>ième</sup> Congrès Français de Mécanique, 28 aout- 1er septembre, Lille.
- ACT.B01.70. A. Beaudoin and S. Huberson, Adapting particle methods to model the dynamics of concentration gradients and chemical reactivity, 23<sup>o</sup> Congrès Français de Mécanique, Lille, 28 au 1 Septembre 2017
- ACT.B01.71. Y. S. Putra, A. Beaudoin, M. Ramos Ortega, G. Rousseaux and S. Huberson, 2017: Estimation of sediment particle trajectories in tidal bores using numerical modelling. 23<sup>ième</sup> Congrès Français de Mécanique, 28 aout- 1er septembre, Lille.
- ACT.B01.72. M. Samson, A. Bernard, T. Monet, P. Lacouture, L. David, 2017: Unsteady forces on a hand in swimming in impulsive start configuration. 42<sup>ème</sup> congrès de la Société de Biomécanique, Reims le 2 et 3 novembre.

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## 2018

- ACT.B01.73. A. Ballu, G. Pineau, D. Calluau, L. David, 2018. Scale effects on flows in a vertical slot fishway with macro-roughnesses. Riverflow 2018, 5/8 septembre, Lyon. Projet Européen H2020 FITHYDRO, Contrat VNF

- ACT.B01.74. A. Ballu, G. Pineau, D. Calluud, L. David, 2018: Influence of macro-roughnesses on vertical slot fishways. 7th International Symposium on Hydraulic Structures, Aachen, Germany, 15-18 May. Projet Européen H2020 FITHYDRO, Contrat VNF
- ACT.B01.75. A. Baramili, L. Chatellier, L. David and L. Ancian, 2018: Prediction of elbow flow dynamics using correlated wall pressure data. ASME 2018 Pressure Vessels and Piping Conference– 15-20 juillet, Prague, Czech Republic. Contrat VIBRATEC
- ACT.B01.76. Chatellier, L.; Gorle, J. M. R.; Pons, F. & Ba, M. 2018: Experimental investigations of a controlled-circulation Darrieus turbine 19th International Symposium on Applications of Laser and Imaging Techniques to Fluid Mechanics, Lisbon, Portugal, 16th-19th July
- ACT.B01.77. Chatellier, L., Gorle, J. M. ., Pons, F., & Ba, M., Towing Tank Testing of a Controlled-Circulation Darrieus Turbine, RENEW2018 - 3rd International Conference on Renewable Energies Offshore, 8 - 10 October, Lisbon, Portugal, 2018
- ACT.B01.78. Costa, S.; Chatellier, L.; Pons, F. & Ba, M. 2018: Parametric design of a Hydro-elastic energy harvester RENEW2018 - 3rd International Conference on Renewable Energies Offshore, 8 - 10 October, Lisbon, Portugal
- ACT.B01.79. D. Diaz, T. Jardin, F. Pons, L. David, 2018: Comparison between start-up and established flow conditions in deformable flapping wings. 19th International Symposium on Applications of Laser Techniques to Fluid Mechanics, Lisbon, Portugal, 15-18 July. ANR DGA EVAPOR
- ACT.B01.80. G. Pineau, G. Vaillie, A. Ballu, D. Calluud, L. David, 2018: Influence of macro-roughnesses in vertical slot fishways. 12th International Symposium on Ecohydraulics, Tokyo, Japon, 19-24 Août. Projet Européen H2020 FITHYDRO, Contrat VNF
- ACT.B01.81. G. Acher, L. Thomas, B. Tremblais, L. David, 2018: Implémentation d'un nouveau modèle de caméra à correction discrète pour résoudre les problèmes de variations d'indice de réfraction. 16ième CFTL, 17 au 21 septembre, Dourdan. ANR DGA EVAPOR, CPER
- ACT.B01.82. N. T. Baker, D. Bailly, J.-C. Monnier, B. Leclaire, D. Diaz, F. Pons, L. David, 2018: Comparaison de méthodes d'évaluation d'efforts par mesures PIV. 16ième CFTL, 17 au 21 septembre, Dourdan. ANR DGA EVAPOR, CPER
- ACT.B01.83. Chatellier, L., Gorle, J. M. R., Pons, F., and Ba, M. 2018, Essais En Bassin D'une Turbine Darrieus À Circulation Contrôlée, 16èmes Journées De L'hydrodynamique, Marseille, 27-29 Novembre
- ACT.B01.84. Costa, S., Chatellier, L., Pons, F., and Ba, M. 2018, Développement D'un Récupérateur D'énergie Hydro-Élastique, 16èmes Journées de l'Hydrodynamique, Marseille, 27-29 Novembre
- ACT.B01.85. P. Daher, C. Lacour, F. Lefebvre, A. Cessou, B. Tremblais, L. Thomas, L. David, B. Lecordier, 2018: Adaptation de la PIV tomographique aux écoulements confinés : cas d'un moteur à combustion interne. 16ième CFTL, 17 au 21 septembre, Dourdan
- ACT.B01.86. A. Dartois, A. Beaudoin et S. Huberson, Calcul d'un champ de pression 3D par méthode d'intégrale aux frontières à partir d'un champ de vitesse 3D obtenu numériquement ou expérimentalement, 16ème Congrès Francophone de Techniques Laser pour la mécanique des fluides, CNRS, CentraleSupélec, Université Paris Saclay, IRSN, Sep 2018, Dourdan, France.
- ACT.B01.87. G. Gomiñ, C. Beaulieu, P. Braud, L. David, 2018: Démarche d'estimation des incertitudes en PIV basée sur la méthode GUM. 16ième CFTL, 17 au 21 septembre, Dourdan. ANR DGA EVAPOR, CPER
- ACT.B01.88. G. Gomiñ, A. Dartois, A. Beaudoin, F. Pons, L. Chatellier, B. Tremblais, L. Thomas, P. Braud, L. David, M. Carini, N. Baker et B. Leclaire 2018: Comparaison de méthodes d'évaluation de la pression à partir de mesures PIV. 16ième CFTL, 17 au 21 septembre, Dourdan. ANR DGA EVAPOR, CPER
- ACT.B01.89. G. Gomiñ, L. Thomas, S. Jarny, 2018 : Mesures de tomographie PIV au sein d'une cellule de cisaillement. 16ième CFTL, 17 au 21 septembre, Dourdan. ANR DGA EVAPOR, CPER
- ACT.B01.90. VT Nguyen, B. Tremblais, F. Pons, L. David, 2018: Mesure de la pression par base de polynômes orthogonaux. 16ième CFTL, 17 au 21 septembre, Dourdan. ANR DGA EVAPOR, CPER

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## 2019

- ACT.B01.91. David, L., Lemkecher, F., Chatellier, L., Courret, D., and Doessegger, A. 2019. "Downstream Fish Passage Technologies for Small-to-Medium Hydropower Plants: Part 1," in HYDRO Energy & Sustainability, Jan. 29-30, Grenoble, France
- ACT.B01.92. Diaz, D., Protas, B., Pons, F., and David, L. 2019. "Application of the Variational Approach for the Computation of Forces around a Wing and Comparison with Other Methods," in 13 Th International Symposium on Particle Image Velocimetry (ISPIV2019), July 22-24, Munich, Germany
- ACT.B01.93. Diaz D., Jardin T., Gourdain N., Pons F., David L., 2019. Impulsive start-up of a deformable flapping wing at different angular conditions. Symposium on Fluid-Structure-Sound Interactions and Control, 27-30th August 2019, Crete island, Greece. Projet Européen H2020 HOMER
- ACT.B01.94. Diaz D., David L., Pons F., Jardin T., Gourdain N., 2019. Study of flapping wings to identify best performance conditions. 44ème Congrès de la Société de Biomécanique - Poitiers 28-30 octobre 2019, Projet Européen H2020 HOMER

- ACT.B01.95. A. Beaudoin, A. Dartois, S. Huberson, 2019 : Asymptotic behavior of dilution index in steady Darcy flows through heterogeneous porous media, 24<sup>e</sup> Congrès Français de Mécanique, Brest, 26 au 30 Août

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### 2020

- ACT.B01.96. Tetard S., Courret D., Tomanova S., Bercocitz Y., Lagarrigue T., Mataix V., David L., 2020. Innocuity project: improvement of criteria to ensure a safe transfer of fish through downstream fish passage solutions. International Symposium of Ecohydraulics, May 2020, Lyon, France.
- ACT.B01.97. Lemkecher F., Chatellier L., Courret D., David L., 2020. Global head losses modelling of inclined trash racks. International Symposium of Ecohydraulics, May 2020, Lyon, France.
- ACT.B01.98. Larrieu T., Pineau G., Calluau D., David L., 2020. Flexible structures, new solutions to improve design of fishways. International Symposium of Ecohydraulics, May 2020, Lyon, France.
- ACT.B01.99. Larrieu T., Pineau G., Calluau D., David L., 2020. Experimental results and modelling of pressure loss generated by flexible structures placed in a turbulent flow. Riverflow, July 2020, Delft, The Netherlands.
- ACT.B01.100. Diaz D., Jardin T., Gourdain N., Pons F., David L., 2020. Multy-fidelity optimization of three-dimensional flapping wing aerodynamics. 55th 3AF International Conference on Applied Aerodynamics 23-25th March 2020, Poitiers, France
- ACT.B01.101. Dewitte M., Couret D., David L., Adeva-Bustos A., 2020. Comparison of solutions to restore a safe downstream migration of fish at a low-head run-of-river power-plant. Fish Passage conference. International conference on river connectivity best practices and innovations. June 29-July 1, 2020. Lisbon (Portugal).
- ACT.B01.102. Albayrak I., David L., Boes R., 2020 Cost-effective and applicable solutions for hydropower impacts on downstream migration. European Stakeholder Workshop on Fish-Friendly Hydropower. 28 – 29 January, 2020, Brussels, Belgium.

### Autres produits présentés dans des colloques / congrès et des séminaires de recherche (40)

#### Les 20% les plus significatifs

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### 2015

- COM.B01.1. S. Jarny, P. Monnet, 2015 : Cohesive sediments from Garonne estuary: a rheological study, Tidal Bore Workshop, Caen, May 18-20
- COM.B01.2. G. Rousseaux, 2015 : A short history of the tidal bore. Tidal Bore Workshop, Caen, May 18-20
- COM.B01.3. BEAUDOIN A., HUBERSON S., Transport equation of concentration gradient solved by means of a lagrangian method, INTERPORE2015, 2015, Padova (Italy)
- COM.B01.4. G. Rousseaux, 2015 : Séminaire en Février 2015 à l'Institut de Mathématique de Bordeaux sur l'invitation de David Lannes (GDT MathOcéan). Sujet : Le Mythe de l'échéenés

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### 2017

- COM.B01.5. L. Chatellier, G. Gomit, L. David, 2017. Sensitivity analysis of two pressure reconstruction methods. 2nd Workshop on Data Assimilation & CFD Processing for Particle Image and Tracking Velocimetry. December 13 to 14, 2017, Delft, The Netherlands.

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### 2018

- COM.B01.6. Costa, S.; Chatellier, L.; Pons, F. & Ba, M. 2018: Development of a aero-elastic energy harvester, SMARTEOLE Colloquium - Smart Rotors to Improve Wind Energy Efficiency and Sustainability, August 28-30, Orleans, France. Projet PEPS INSIS REO
- COM.B01.7. L. David, M. Dewitte & D. Courret, 2018. FITHydro activities related to downstream fish migration for small-to-medium hydropower plants. 4th Regional Stakeholder Workshop – Alpes region. 4-5 septembre 2018, Augsburg, Allemagne. Projet Européen H2020 FITHYDRO

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### 2019

- COM.B01.8. Robertson, S. 2019. Scattering of co-current surface waves on an analogue black hole, GR22/Amaldi13 conference in Valencia, Spain, 07-12/07/2019.

#### Les 80% restants

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### 2015

- COM.B01.9. A. Berchet, B. Simon, A. Beaudoin, P. Lubin, G. Rousseaux & S. Huberson, 2015 : The tidal bore as a wave-current interaction problem: fluid and massive particles trajectories. Tidal Bore Workshop, Caen, May 18-20
- COM.B01.10. D. Calluud, G. Pineau, L. David, 2015. Fish behaviour analysis in vertical slot fishways. Fish Passage conference. International conference on river connectivity best practices and innovations. June 22-24, 2015 Groningen (The Netherlands).
- COM.B01.11. L. Chatellier, A. Beaudoin, L. David, F. Pons, S. Huberson, B. Tremblais, Y.J. Jeon, 2015. CFD-based pressure evaluation from PIV measurements. NIOPLEX Workshop on data assimilation. Berlin February 2015.
- COM.B01.12. L. Chatellier, L. David, D. Calluud, Y. Devaux & L. Thomas, 2015 : Hydrodynamics of laboratory-generated tidal bores. Tidal Bore Workshop, Caen, May 18-20
- COM.B01.13. D. Courret, M. Larinier, L. David, L. Chatellier, 2015. Development of criteria for the design and dimensioning of fish-friendly intakes for small hydropower plant. Fish Passage conference. International conference on river connectivity best practices and innovations. June 22-24, 2015 Groningen (The Netherlands).
- COM.B01.14. G. Rousseaux, 2015 : The tidal bore as a wave-current interaction problem, International Tidal Bore Workshop Recent Studies and Further Research, 2015, Caen
- COM.B01.15. G. Rousseaux, 2015 : Wave-current interaction as an example of spatial bifurcation, BIFD2015, Sixth International Symposium on Bifurcations and Instabilities in Fluid Dynamics, 2015, Paris
- COM.B01.16. SAMSON M., MONNET T., BERNARD A., LACOUTURE P., DAVID L., Hydrodynamic angles, orientation and velocity of the hand in front crawl swimming, 33rd International Society of Biomechanics in Sport, 2015, Poitiers(France)
- COM.B01.17. G. Rousseaux, 2015 : Séminaire en Mars 2015 à l'ESPCI sur l'invitation d'Elie Raphael. Sujet : Le Mythe de l'échéneïs.
- COM.B01.18. G. Rousseaux, 2015 : Séminaire en Novembre 2015 au Laboratoire Onde et Matière d'Aquitaine de l'Université Bordeaux sur l'invitation de Hamid Kellay. Sujet : Gravitation Analogue.

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## 2016

- COM.B01.19. P. Blinde, D. Michaelis, B. van Oudheusden, P-E Weiss, R. de Kat, A. Laskari, Y. J. Jeon, L. David, D. Schanz, F. Huhn, S. Gesemann, M. Novara, C. McPhaden, N. Neeteson, D. Rival, J. FG Schneiders, F. Schrijer, 2016. Comparative assessment of PIV-based pressure evaluation techniques applied to a transonic base flow. Workshop Program PIV/ PTV-based pressure determination, PIV/ PTV pressure challenge and Uncertainty quantification, Munich, June 2nd 2016.
- COM.B01.20. L. David, Y.J. Jeon, L. Chatellier, V. T. Nguyen, F. Pons, A. Beaudoin, S. Huberson, B. Tremblais, 2016. Pressure evaluation from PIV measurements by several approaches. Workshop on CFD Processing Techniques for Particle Image and -Tracking Velocimetry. Lisbon, Portugal, July 3, 2016.
- COM.B01.21. Y. J. Jeon, T. Jardin, L. Chatellier, L. David, 2016: Influence of wing kinematics on flapping flight. Workshop Non-Intrusive Optical Flow Diagnostics (NIOPLEX) 25 - 26 October 2016, Delft, The Netherlands
- COM.B01.22. N.J. Neeteson, T. A. Earl, G. Gomit, Y. J. Jeon, L. Chatellier, D. E. Rival, L. David, 2016 Sensitivity Analysis of Lagrangian Finite Volume Method for Pressure Evaluation on 3D Experimental Data. Workshop Non-Intrusive Optical Flow Diagnostics (NIOPLEX) 25 - 26 October 2016, Delft, The Netherlands
- COM.B01.23. Y. Satria Putra, S. Huberson, A. Beaudoin et L. Thomas, The trajectories of sediment grains on a tidal bore: a numerical study using OpenFOAM, Journées des doctorants de 2016, Institut Pprime, Futuroscope, France

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## 2017

- COM.B01.24. T. Earl, C. Lacour, B. Lecordier, L. David, 2017. Spectral analysis of Time Resolved PIV by FTEE in Homogeneous Isotropic Turbulence. Workshop on New Challenges in Wall Turbulence, Lille, France, 14-16 June, 2017.
- COM.B01.25. A. Ballu, G. Pineau, D. Calluud, L. David, 2017. Influence of the presence of sills on the behavior of brown trouts (*Salmo trutta*) in an experimental vertical slot fishway. Fish Passage conference. International conference on river connectivity best practices and innovations. June 19-21, 2017. Oregon State University - Corvallis, Oregon (USA).
- COM.B01.26. G. Rousseaux, 2017 : Communication orale à l'Euromech Colloquium 588 "Coupling Mechanisms and Multi- Scaling in Granular-Fluid Flows", Toulouse, 2-5 Oct. 2017. Oscillating Sand Ripples in the Laboratory. <http://588.euromech.org>
- COM.B01.27. G. Rousseaux, 2017 : Séminaire en Mai 2017 au Laboratoire Ondes et Milieux Complexes de l'Université du Havre sur l'invitation d'Innocent Mutabazi. Sujet : Gravitation Analogue.

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## 2018

- COM.B01.28. I. Albayrak, L. David, R. Boes, 2018. FITHydro activities related to downstream fish migration for medium-to-large hydropower plants. 4th Regional Stakeholder Workshop – Alpes region. 4-5 septembre 2018, Augsburg, Allemagne. Projet Européen H2020 FITHYDRO
- COM.B01.29. L. David, I. Albayrak & D. Courret, 2018. Solutions for downstream migration. 3rd Regional Stakeholder Workshop – Scandinavia. 4-5 juin 2018, Stockholm, Suède. Projet Européen H2020 FITHYDRO
- COM.B01.30. L. David, I. Albayrak & D. Courret, 2018. Solutions for downstream migration. 2nd Regional Stakeholder Workshop – Iberian Peninsula. 20 mars 2018, Lisbon Portugal. Projet Européen H2020 FITHYDRO
- COM.B01.31. L. David, S. Jarny, I. Albayrak & N. Ruther, 2018. Sediment transport. First Regional Stakeholder Workshop – France & Belgium. 24-25 Janvier 2018, Meudon, France. Projet Européen H2020 FITHYDRO
- COM.B01.32. L. David, I. Albayrak & D. Courret, 2018. FITHydro activities related to downstream fish migration. 4th Regional Stakeholder Workshop – Alpes region. 4-5 septembre 2018, Augsburg, Allemagne. Projet Européen H2020 FITHYDRO
- COM.B01.33. A. Harby, L. David, 2018. The eflows methodology. 2nd Regional Stakeholder Workshop – Iberian Peninsula. 20 mars 2018, Lisbon Portugal. Projet Européen H2020 FITHYDRO
- COM.B01.34. G. Rousseaux, 2018 : Classical analogue of an interstellar travel through a hydrodynamic wormhole. Communication orale aux Journées Matière Condensée JMC2018 à Grenoble en Août 2018.
- COM.B01.35. G. Rousseaux, 2018 : Séminaire en Mars 2018 au Laboratoire de Mathématiques et Applications de l'Université de Poitiers sur l'invitation de Farida Enikeeva. Sujet : Gravitation Analogue.

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## 2019

- COM.B01.36. David L., Courret D., 2019. FITHydro activities related to downstream fish migration in France. Workshop on development of fish migration technologies,. 18 mars 2019, Zurich, Suisse. Projet Européen H2020 FITHYDRO
- COM.B01.37. Courret D., David L., 2019. Brief overview of state-of-the-art, knowledge gaps and research needed from French point of view. Workshop on development of fish migration technologies,. 18 mars 2019, Zurich, Suisse. Projet Européen H2020 FITHYDRO
- COM.B01.38. Fourdrinoy, J. 2019. La bataille d'Actium et le Mythe de l'échéneïs-remora, Rencontre du non-linéaire, Paris, France, 03/2019.
- COM.B01.39. M. Lo, M. Cruchon, A. Beaudoin et F. Compère, 2019 : Transport sédimentaire et évolutions avec e réchauffement climatique, Journée du GIS HED2 & Rencontres SHF - du 20 au 22 Novembre à Marne La Vallée, France
- COM.B01.40. G. Rousseaux, 2019 : Séminaire en Octobre 2019 à l'Institut Pascal au Campus de Montluçon de l'IUT d'Allier sur l'invitation de Pascal Biwole. Sujet : La Bataille d'Actium.