

## Matthieu LEMAIRE

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## WORK EXPERIENCE

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- 2016/02-2020/08 (4.5 years) • **Nuclear reactor physicist at the Ulsan National Institute of Science and Technology (UNIST), Ulsan, South Korea**  
- **research assistant professor** from 2019/04; post-doctoral fellow from 2016/02 to 2019/04  
- **developer of UNIST Monte Carlo neutron-photon transport code MCS**  
- implementation, verification & validation of photon physics and neutron-photon transport mode  
- participation to the OECD/NEA MHTGR-350 benchmark with MCS/GAMMA+ coupled system  
- supervision of 6 students and 5 interns  
- 25 peer-reviewed publications and 45 conference papers (including 12 oral presentations)
- 2012/11-2015/11 (3 years) • **Nuclear reactor physicist at the Atomic Energy Commission (CEA), Cadarache, France**  
- **PhD student** at CEA “Service de Physique des Réacteurs et du Cycle” (reactor physics division)  
- experimental validation of nuclear-data library JEFF3.1.1 and TRIPOLI-4 for the calculation of nuclear heating in the Jules Horowitz material-testing reactor  
- interpretation of experimental programs conducted in EOLE and OSIRIS nuclear reactors with thermo-luminescent detectors, an ionization chamber and a differential calorimeter
- 2012 (6 months) • **Nuclear reactor physicist at the Atomic Energy Commission (CEA), Cadarache, France**  
- **intern** at CEA “Service de Physique des Réacteurs et du Cycle” (reactor physics division)  
- TRIPOLI-4 Monte Carlo calculations in support of EOLE zero-power nuclear facility
- 2010 (3 months) • **Research assistant at the Systems and Control Centre (CAS), Mines ParisTech, Paris, France**  
- bibliographic study internship in the field of quantum control
- 2009 (1 month) • Bell boy at Honke Bankyu hotel (31 employees), *Yunishigawa Onsen, Japan*

## EDUCATION

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- 2012 - 2015 • **Aix-Marseille University, PhD degree in instrumentation (simulation of detectors in nuclear reactor), Marseille, France**
- 2008 - 2012 • **ENSTA ParisTech, Master’s degree**, major in nuclear reactor physics, *Paris-Saclay, France*  
• **Karlsruher Institut für Technology (KIT), gap year, Master’s 1st year in computer science, Germany**

## COMPUTER SKILLS

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- Practice of Linux for code development and neutron-photon transport Monte Carlo simulation
- Programming: Fortran 2003, Python, Java, C/C++
- Tools: Matlab (post-treatment), SourceTree, GitHub (version control), Vim (development), Microsoft Office
- Nuclear physics codes: TRIPOLI-4 (CEA), MCNP6 (LANL), MCS (UNIST), PENELOPE (university of Barcelona), DARWIN (CEA), GAMMA+ (KAERI)

## LANGUAGE SKILLS

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- French native speaker
- English fluent : TOEIC Listening & Reading Test (980/990; 2010)
- German advanced : one year in Germany (2011), Goethe-Zertifikat C1 (83.5/100; 2012)
- Korean conversational : four years in South Korea, Test of Proficiency in Korean 2<sup>nd</sup> grade (197/200; 2017)

**INTERESTS:** chess player (1940 FIDE rating)

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## DISSERTATIONS

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2. “Validation of photon-heating calculations in material-testing reactors by means of the AMMON experimental program and the CARMEN device” [Validation des calculs d’échauffements photoniques en réacteur d’irradiation au moyen du programme expérimental AMMON et du dispositif CARMEN], **PhD thesis**, Aix-Marseille University, France, 2015, link: <http://www.theses.fr/en/2015AIXM4072>
1. “Interpretation of AMMON experiment in the context of the Verification & Validation of HORUS-3D/N neutron calculation tool for the Jules Horowitz reactor” [Interprétation du programme expérimental AMMON dans le cadre de la qualification du formulaire HORUS-3D/N pour le réacteur Jules Horowitz], **Master thesis**, ENSTA ParisTech, 2012.

## 25 PEER-REVIEWED JOURNAL PUBLICATIONS

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25. F. Setiawan, **M. Lemaire**, D.J Lee, “Analysis of VVER-1000 mock-up criticality experiments with nuclear data library ENDF/B-VIII.0 and Monte Carlo code MCS”, Nuclear Engineering and Technology, 2020, doi: [10.1016/j.net.2020.06.015](https://doi.org/10.1016/j.net.2020.06.015)
24. J. Jang, J. Choe, S. Choi, **M. Lemaire**, D.J. Lee, H.C. Shin, “Conceptual design of long-cycle boron-free small modular pressurized water reactor with control rod operation”, International Journal of Energy Research, 44(8):6463-6482, 2020, doi: [10.1002/er.5381](https://doi.org/10.1002/er.5381)
23. V. Dos, H. Lee, Y. Jo, **M. Lemaire**, W. Kim, S. Choi, P. Zhang, D.J. Lee, “Overcoming the challenges of Monte Carlo depletion: Application to a material-testing reactor with the MCS code”, Nuclear Engineering and Technology, 52(9):1881-1895, 2020, doi: [10.1016/j.net.2020.02.003](https://doi.org/10.1016/j.net.2020.02.003)
22. H. Lee, W. Kim, P. Zhang, **M. Lemaire**, A. Khassenov, J. Yu, Y. Jo, J. Park, D.J. Lee, “MCS – a Monte Carlo particle transport code for large-scale power reactor analysis”, Annals of Nuclear Energy, 139:107276, 2020, doi: [10.1016/j.anucene.2019.107276](https://doi.org/10.1016/j.anucene.2019.107276)
21. **M. Lemaire**, H. Lee, P. Zhang, D.J. Lee, “Interpretation of two SINBAD photon-leakage benchmarks with nuclear library ENDF/B-VIII.0 and Monte Carlo code MCS”, Nuclear Engineering and Technology, 52(7):1355-1366, 2020, doi: [10.1016/j.net.2019.12.014](https://doi.org/10.1016/j.net.2019.12.014)
20. J. Yu, H. Lee, **M. Lemaire**, H. Kim, P. Zhang, D.J. Lee, “Fuel performance analysis of BEAVRS benchmark cycle 1 depletion with MCS/FRAPCON coupled system”, Annals of Nuclear Energy, 138:107192, 2020, doi: [10.1016/j.anucene.2019.107192](https://doi.org/10.1016/j.anucene.2019.107192)
19. N.N.T. Mai, P. Zhang, **M. Lemaire**, B. Ebiwonjumi, W. Kim, H. Lee, D.J. Lee, “Extension of Monte Carlo code MCS to spent fuel cask shielding analysis”, International Journal of Energy Research, 44(10):8089-8102, 2020, doi: [10.1002/er.5023](https://doi.org/10.1002/er.5023)
18. E. Jeong, J. Park, H.C. Lee, P. Zhang, J. Yu, **M. Lemaire**, S. Choi, D.J. Lee, “Verification of DeCART2D/CAPP code system for VHTR analysis with PMR-200 benchmark”, Annals of Nuclear Energy, 133:154-168, 2019, doi: [10.1016/j.anucene.2019.05.002](https://doi.org/10.1016/j.anucene.2019.05.002)
17. M.J. Kim, W. Kim, D.J. Lee, **M. Lemaire**, H.J. Lee, D.S. Sohn, H. Kwon, “Development of integral-type spent fuel pool storage rack with gadolinium and europium-containing structure materials”, Annals of Nuclear Energy, 130:107-117, 2019, doi: [10.1016/j.anucene.2019.02.027](https://doi.org/10.1016/j.anucene.2019.02.027)
16. J. Yu, H. Lee, **M. Lemaire**, H. Kim, P. Zhang, D.J. Lee, “MCS-based neutronics/thermal-hydraulics/fuel-performance coupling with CTF and FRAPCON”, Computer Physics Communications, 238:1-18, 2019, doi: [10.1016/j.cpc.2019.01.001](https://doi.org/10.1016/j.cpc.2019.01.001)
15. P. Zhang, H. Lee, **M. Lemaire**, C. Kong, J. Choe, J. Yu, F. Khoshahval, D.J. Lee, “Practical Monte Carlo simulation using modified power method with preconditioning”, Annals of Nuclear Energy, 127:372-384, 2019, doi: [10.1016/j.anucene.2018.12.023](https://doi.org/10.1016/j.anucene.2018.12.023)
14. B. Ebiwonjumi, S. Choi, **M. Lemaire**, D.J. Lee, H.C. Shin, H.S. Lee, “Verification and validation of radiation source term capabilities in STREAM”, Annals of Nuclear Energy, 124:80-87, 2019, doi: [10.1016/j.anucene.2018.09.034](https://doi.org/10.1016/j.anucene.2018.09.034)
13. T.D.C. Nguyen, J. Choe, B. Ebiwonjumi, **M. Lemaire**, D.J. Lee, “Core design of long-cycle small modular lead-cooled fast reactor”, International Journal of Energy Research, 43(1):254-273, 2019, doi: [10.1002/er.4258](https://doi.org/10.1002/er.4258)
12. K.H.N. Nguyen, S. Choi, **M. Lemaire**, D.J. Lee, “Depletion chain optimization of lattice code STREAM for LWR fuel assembly burnup analysis”, Annals of Nuclear Energy, 123:18-45, 2019, doi: [10.1016/j.anucene.2018.08.030](https://doi.org/10.1016/j.anucene.2018.08.030)
11. B. Ebiwonjumi, S. Choi, **M. Lemaire**, D.J. Lee, H.C. Shin, “Validation of lattice physics code STREAM for predicting pressurized water reactor spent nuclear fuel isotopic inventory”, Annals of Nuclear Energy, 120:431-449, 2018, doi: [10.1016/j.anucene.2018.06.002](https://doi.org/10.1016/j.anucene.2018.06.002)
10. **M. Lemaire**, H. Lee, B. Ebiwonjumi, C. Kong, W. Kim, Y. Jo, J. Park, D.J. Lee, “Verification of photon transport capability of UNIST Monte Carlo code MCS”, Computer Physics Communications, 231:1-18, 2018, doi: [10.1016/j.cpc.2018.05.008](https://doi.org/10.1016/j.cpc.2018.05.008)

9. J. Jang, W. Kim, S. Jeong, E. Jeong, J. Park, **M. Lemaire**, H. Lee, Y. Jo, P. Zhang, D.J. Lee, “*Validation of UNIST Monte Carlo code MCS for criticality safety analysis of PWR spent fuel pool and storage cask*”, Annals of Nuclear Energy, 114:495-509, 2018, doi: [10.1016/j.anucene.2017.12.054](https://doi.org/10.1016/j.anucene.2017.12.054)
8. **M. Lemaire**, H. Lee, N.I. Tak, H.C. Lee, D.J. Lee, “*Multi-physics steady-state analysis of OECD/NEA modular high temperature gas-cooled reactor MHTGR-350*”, Journal of Nuclear Science and Technology, 54(6):668-680, 2017, doi: [10.1080/00223131.2017.1299649](https://doi.org/10.1080/00223131.2017.1299649)
7. **M. Lemaire**, C. Vaglio-Gaudard, A. Lyoussi, C. Reynard-Carette, “*Impact study on the methodology used for photon-heating determination in material-testing reactors*”, IEEE Transactions on Nuclear Science, 63(3):1499-1506, 2016, doi: [10.1109/TNS.2016.2560261](https://doi.org/10.1109/TNS.2016.2560261)
6. **M. Lemaire**, C. Vaglio-Gaudard, A. Lyoussi, C. Reynard-Carette, J. Di Salvo, A. Gruel, “*Experimental validation of photon heating calculation for the Jules Horowitz Reactor*,” Nuclear Instruments and Methods in Physics Research A, 780:68-80, 2015, doi: [10.1016/j.nima.2015.01.054](https://doi.org/10.1016/j.nima.2015.01.054)
5. **M. Lemaire**, C. Vaglio-Gaudard, A. Lyoussi, C. Reynard-Carette, “*For a better estimation of gamma heating in nuclear material-testing reactors and associated devices: status and work plan from calculation methods to nuclear data*”, Journal of Nuclear Science and Technology, 52(9):1093-1101, 2015, doi: [10.1080/00223131.2015.1009957](https://doi.org/10.1080/00223131.2015.1009957)
4. J. Di Salvo, C. Vaglio Gaudard, A. Gruel, B. Geslot, P. Blaise, **M. Lemaire**, “*The AMMON experiment in EOLE zero power facility: a challenging program devoted to the neutron and photon physics*”, Journal of Nuclear Science and Technology, 52(7-8):1034-1043, 2015, doi: [10.1080/00223131.2015.1036821](https://doi.org/10.1080/00223131.2015.1036821)
3. C. Vaglio-Gaudard, A.C. Colombier, J.P. Hudelot, O. Leray, **M. Lemaire**, V. Sergeyeva, J. Di Salvo, A. Gruel, P. Sireta, “*Analysis of the AMMON experimental program in the EOLE facility supporting the qualification of the JHR neutron and photon tools*”, IEEE Transactions on Nuclear Science, 61(4):2246-2253, 2014, doi:[10.1109/TNS.2014.2306440](https://doi.org/10.1109/TNS.2014.2306440)
2. C. Vaglio-Gaudard, K. Stoll, S. Ravaux, **M. Lemaire**, A.C. Colombier, J.P. Hudelot, D. Bernard, H. Amharrak, J. Di Salvo, A. Gruel, “*Monte Carlo interpretation of the photon heating measurements in the integral AMMON/REF experiment in the EOLE facility*,” IEEE Transactions on Nuclear Science, 61(1):574-583, 2014, doi:[10.1109/TNS.2013.2296356](https://doi.org/10.1109/TNS.2013.2296356)
1. P. Blaise, J. Di Salvo, C. Vaglio-Gaudard, D. Bernard, H. Amharrak, **M. Lemaire**, S. Ravaux, “*Nuclear heating measurement in critical facilities and experimental validation of code and libraries – an application to prompt & delayed gamma nuclear data needs*”, Physics Procedia, 59:3-16, 2014, doi: [10.1016/j.phpro.2014.10.002](https://doi.org/10.1016/j.phpro.2014.10.002)

## 45 CONFERENCE PAPERS

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45. **M. Lemaire**, H. Lee (speaker), D.A. Fynan, D.J. Lee, “*Implementation of photonuclear reactions in UNIST Monte Carlo code MCS*”, Proc. KNS Autumn Meeting, Changwon, South Korea, 2020
44. **M. Lemaire** (speaker), H. Lee, D.J. Lee, “*KERMA and DPA tallies in the Monte Carlo code MCS*”, Proc. KNS Virtual Spring Meeting, 2020
43. K. Kim (poster), **M. Lemaire**, N.N.T. Mai, W. Kim, D.J. Lee, “*Generation of a multigroup gamma production and photon transport library for STREAM*”, Proc. KNS Virtual Spring Meeting, 2020
42. F. Setiawan, **M. Lemaire**, H. Lee, P. Zhang, D.J. Lee, “*VVER-1000 benchmark interpretation with Monte Carlo code MCS*”, Proc. Int. Conf. PHYSOR-2020, Cambridge, United Kingdom, 2020
41. V. Dos (speaker), H. Lee, J. Choe, **M. Lemaire**, H.C. Shin, H.S. Lee, D.J. Lee, “*MCS Monte Carlo multi-physics depletion analysis of an OPR-1000 reactor*”, Proc. Int. Conf. ICENES 2019, Bali, Indonesia, 2019
40. F. Setiawan (speaker), **M. Lemaire**, H. Lee, D.J. Lee, “*Criticality analysis of VVER-1000 mock-up with the Monte Carlo code MCS*”, Proc. KNS Autumn Meeting, Seoul, South Korea, 2019
39. W. Kim (poster), J. Jang, B. Ebiwonjumi, H. Lee, **M. Lemaire**, P. Zhang, S. Kang, H. Kim, N.N.T. Mai, S. Choi, J. Park, J. Choe, D.J. Lee, “*Development of AutoCASK code system for PWR spent nuclear fuel cask analysis at UNIST*”, Proc. KNS Autumn Meeting, Seoul, South Korea, 2019
38. V. Dos, H. Lee, J. Choe, **M. Lemaire** (speaker), H.C. Shin, H.S. Lee, D.J. Lee, “*Verification and validation of MCS multi-physics analysis capability for OPR-1000 multi-cycle operation*”, Proc. Int. Conf. M&C 2019, Portland, Oregon, USA, 2019
37. H. Lee (speaker), W. Kim, P. Zhang, A. Khassenov, Y. Jo, J. Park, J. Yu, **M. Lemaire**, D.J. Lee, “*Development of Monte Carlo multi-physics code MCS for power reactor analysis at UNIST*”, Proc. Int. Conf. M&C 2019, Portland, Oregon, USA, 2019
36. J. Choe (poster), S. Choi, J. Park, H. Lee, **M. Lemaire**, H.C. Shin, H.S. Lee, D.J. Lee, “*Verification of asymmetric fuel assembly treatment in STREAM/RAST-K 2.0*”, Proc. Int. Conf. M&C 2019, Portland, Oregon, USA, 2019
35. **M. Lemaire** (poster), F. Setiawan, H. Lee, P. Zhang, D.J. Lee, “*Validation of coupled neutron-photon transport mode of Monte Carlo code MCS*”, Proc. Int. Conf. M&C 2019, Portland, Oregon, USA, 2019
34. T.D.C. Nguyen (poster), H. Lee, J. Choe, **M. Lemaire**, D.J. Lee, “*APR-1400 whole-core depletion analysis with MCS*”, Proc. Int. Conf. M&C 2019, Portland, Oregon, USA, 2019
33. P. Zhang, H. Lee (speaker), N.N.T. Mai, **M. Lemaire**, D.J. Lee, “*Development of a new weight window generator based on Markov decision process*”, Proc. Int. Conf. M&C 2019, Portland, Oregon, USA, 2019

32. J. Jang (poster), J. Choe, S. Choi, J. Park, **M. Lemaire**, D.J. Lee, H.C. Shin, “*Westinghouse 2-loop plant loading pattern optimization for last few cycles before shutdown*”, Proc. Int. Conf. M&C 2019, Portland, Oregon, USA, 2019
31. F. Setiawan, **M. Lemaire** (speaker), A. Cherezov, D.J. Lee, “*Validation of MCS coupled neutron-photon calculations with SINBAD benchmark experiments*”, Proc. KNS Spring Meeting, Jeju, South Korea, 2019
30. U.S. Hidayat, A. Agung, **M. Lemaire**, V. Dos (poster), A. Widiharto, H. Lee, D.J. Lee, “*MCS cycle depletion analysis and validation of excess reactivity and shutdown margin for the Kartini Triga Mark II research reactor*”, Proc. Int. Conf. ICAPP 2019, Juan-les-Pins, France, 2019
29. H. Lee (speaker), P. Zhang, **M. Lemaire**, D.J. Lee, “*Sensitivity study of BEAVRS cycle 1 simulation by Monte Carlo code MCS*”, Proc. Int. Conf. ICAPP 2019, Juan-les-Pins, France, 2019
28. J. Jang (speaker), J. Choe, S. Choi, J. Park, **M. Lemaire**, D.J. Lee, J.E. Jung, H.C. Shin, “*Long-cycle soluble boron-free SMPWR with zircaloy reflector*”, Proc. Int. Conf. ICAPP 2019, Juan-les-Pins, France, 2019
27. **M. Lemaire** (speaker), H. Lee, P. Zhang, D.J. Lee, “*Validation of MCS coupled neutron/photon mode against SINBAD shielding benchmark*”, Proc. Int. Conf. ICAPP 2019, Juan-les-Pins, France, 2019
26. M.S. Yazid (speaker), **M. Lemaire**, M.M. Sies, D.J. Lee, “*Performance analysis of random sampling algorithms on GNU Octave*”, Proc. Int. Conf. INUSTEC2018, Skudai, Malaysia, 2018
25. S. Jeong (poster), W. Kim, **M. Lemaire**, D.J. Lee, “*Assessment on PWR fuel depletion and neutron multiplication factors for high density spent fuel pool*”, Proc. KNS Autumn Meeting, Yeosu, South Korea, 2018
24. P. Zhang (speaker), **M. Lemaire**, H. Lee, N.N.T. Mai, D.J. Lee, “*Development of a variance reduction scheme in the MCS Monte Carlo code*”, Proc. KNS Autumn Meeting, Yeosu, South Korea, 2018
23. **M. Lemaire** (speaker), H. Lee, D.J. Lee, “*Implementation of tally convergence tests in UNIST Monte Carlo code MCS*”, Proc. KNS Autumn Meeting, Yeosu, South Korea, 2018
22. N.N.T. Mai (speaker), Chidong Kong, **M. Lemaire**, P. Zhang, H.C. Shin, D.J. Lee, “*Application of UNIST Monte Carlo code MCS for nuclear fuel transport cask analysis*”, Proc. Int. Conf. NURER-2018, Jeju, South Korea, 2018
21. B. Ebiwonjumi (speaker), H. Lee, J. Choe, **M. Lemaire**, D.J. Lee, “*Monte Carlo code MCS multi-cycle depletion analysis of Westinghouse 3-loop PWR*”, Proc. Int. Conf. NURER-2018, Jeju, South Korea, 2018
20. **M. Lemaire** (speaker), H. Lee, B. Ebiwonjumi, C. Kong, W. Kim, Y. Jo, J. Park, D.J. Lee, “*Development of photon-transport capability in UNIST Monte Carlo code MCS*”, Proc. Int. Conf. PHYSOR-2018, Cancun, Mexico, 2018
19. J. Yu (speaker), H. Kim, H. Lee, **M. Lemaire**, P. Zhang, D.J. Lee, “*Verification of Monte Carlo code MCS coupled with CTF and FRAPCON*”, Proc. Int. Conf. PHYSOR-2018, Cancun, Mexico, 2018
18. B. Ebiwonjumi, T.D.C. Nguyen, J. Choe, **M. Lemaire** (speaker), D.J. Lee, “*MCS analysis of LAEA lead-cooled fast reactor core neutronics benchmark*”, Proc. Int. Conf. PHYSOR-2018, Cancun, Mexico, 2018
17. T.D.C. Nguyen (speaker), J. Choe, B. Ebiwonjumi, **M. Lemaire**, D.J. Lee, “*Conceptual core design of a small modular fast reactor cooled by lead-bismuth eutectic*”, Proc. Int. Conf. PHYSOR-2018, Cancun, Mexico, 2018
16. K.H.N. Nguyen (speaker), S. Choi, **M. Lemaire**, D.J. Lee, “*ENDF/B-VII depletion library compression to optimize the computational efficiency in STREAM code*”, Proc. Int. Conf. PHYSOR-2018, Cancun, Mexico, 2018
15. **M. Lemaire** (speaker), H. Lee, B. Ebiwonjumi, C. Kong, W. Kim, Y. Jo, J. Park, D.J. Lee, “*Recent work on photon transport with UNIST Monte Carlo code MCS*”, Proc. Int. Conf. RPHA17, Chengdu, China, 2017
14. C. Kong (speaker), H. Lee, **M. Lemaire**, W. Kim, Y. Jo, J. Park, J. Choe, B. Ebiwonjumi, D.J. Lee, “*Introduction to UNIST spent nuclear fuel transportation package analysis code system*”, Proc. Int. Conf. RPHA17, Chengdu, China, 2017
13. B. Ebiwonjumi, S. Choi, **M. Lemaire** (speaker), D.J. Lee, H.C. Shin, “*Experimental validation of STREAM for spent nuclear fuel applications*”, Proc. Int. Conf. RPHA17, Chengdu, China, 2017
12. K.H.N. Nguyen (speaker), J. Choe, S. Choi, H. Lee, W. Kim, **M. Lemaire**, DJ Lee, “*Verification of STREAM for OPR-1000 fuel assembly depletion calculations*”, Proc. Int. Conf. RPHA17, Chengdu, China, 2017
11. W. Lee (speaker), S. Choi, B. Ebiwonjumi, **M. Lemaire**, D.J. Lee, “*Implementation of on-the-fly energy release per fission model in STREAM*”, Proc. Int. Conf. RPHA17, Chengdu, China, 2017
10. **M. Lemaire** (speaker), H. Lee, N.I. Tak, H.C. Lee, D.J. Lee, “*Monte Carlo / thermal-fluids coupled calculations for MHTGR-350MW benchmark*”, Proc. Int. Conf. M&C 2017, Jeju, South Korea, 2017
9. **M. Lemaire** (speaker), H. Lee, N.I. Tak, H.C. Lee, D.J. Lee, “*MHTGR-350MW coupled steady-state results using MCS and GAMMA+*”, Proc. KNS Autumn Meeting, Gyeongju, South Korea, 2016
8. **M. Lemaire** (speaker), C. Vaglio-Gaudard, A. Lyoussi, C. Reynard-Carette, “*Impact study on the methodology used for photon-heating determination in material-testing reactors*”, Proc. Int. Conf. ANIMMA-2015, Lisbon, Portugal, 2015
7. H. Amharrak (speaker), **M. Lemaire**, C. Reynard-Carette, D. Fourmentel, A. Lyoussi, C. Vaglio-Gaudard, M. Carette, J.F. Villard, “*Monte Carlo simulations of the nuclear energy deposition inside the CARMEN-1P differential calorimeter irradiated into OSIRIS reactor*”, Proc. Int. Conf. ANIMMA-2015, Lisbon, Portugal, 2015
6. C. Vaglio-Gaudard (speaker), A.C. Colombier, **M. Lemaire**, J. Di Salvo, A. Gruel, “*Monte Carlo analysis of reactivity effect measurements in the AMMON experimental program dedicated to JHR neutron studies*”, Proc. Int. Conf. PHYSOR-2014, Kyoto, Japan, 2014

5. L. Gaubert (poster), C. D'Aletto, D. Fourmentel, **M. Lemaire**, A. Lyoussi, C. Reynard, “*Neutronics and photonics Monte Carlo calculations in support to the design of the CARMENI device in the OSIRIS reactor*”, Proc. Int. Conf. ANIMMA-2013, Marseille, France, 2013
4. **M. Lemaire** (poster), C. Vaglio-Gaudard, A. Lyoussi, C. Reynard-Carette, “*For a better estimation of gamma-heating in experimental reactors and devices: stakes and work plan from calculation methods to nuclear data*”, Proc. Int. Conf. ANIMMA-2013, Marseille, France, 2013
3. C. Vaglio-Gaudard (speaker), A.C. Colombier, J.P. Hudelot, O. Leray, **M. Lemaire**, V. Sergeyeva, J. Di Salvo, A. Gruel, P. Sireta, “*Analysis of the AMMON experimental program in the EOLE facility supporting the qualification of the JHR neutron and photon tools*”, Proc. Int. Conf. ANIMMA-2013, Marseille, France, 2013
2. C. Vaglio-Gaudard (speaker), O. Leray, **M. Lemaire**, A.C. Colombier, J.P. Hudelot, “*First feedback with the AMMON integral experiment for the JHR calculations*”, Proc. Int. Conf. WONDER-2012, Aix-en-Provence, France, 2012
1. A.C. Colombier (speaker), H. Amharrak, D. Fourmentel, S. Ravaux, D. Regnier, O. Gueton, J.P. Hudelot, **M. Lemaire**, “*Nuclear data production, calculation and measurement: a global overview of the gamma heating issue*”, Proc. Int. Conf. WONDER-2012, Aix-en-Provence, France, 2012

## LETTER TO THE EDITOR

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1. F. Khoshahval, P. Zhang, **M. Lemaire**, D.J. Lee, reply to the letter to the editor on [F. Khoshahval, M. Park, H.C. Shin, P. Zhang, D.J. Lee, “*Vanadium, rhodium, silver and cobalt self-powered neutron detector calculations by RAST-K v2.0*”, Annals of Nuclear Energy, 111:644-659, 2018], Annals of Nuclear Energy, 115:635-636, 2018, doi: [10.1016/j.anucene.2018.02.029](https://doi.org/10.1016/j.anucene.2018.02.029)