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- Technical and Development Director,
Institut National des Sciences et Techniques Nucléaires (INSTN-Madagascar)
- National Liaison Assistant for IAEA Affairs (NLA)
- Lecturer, Department of Physics, Faculty of Sciences,
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1. PERSONAL DATA

First Name : Naivo
 Family name : RABESIRANANA
 Date of birth : 20 November 1963
 Country of citizenship: MADAGASCAR
 Professional address:
 Institut National des Sciences et Techniques Nucléaires (INSTN- Madagascar)
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2. FIELDS OF INTEREST: Radio-analytical techniques, Nuclear spectrometry, Environmental radioactivity, Environmental pollution, Environmental tracers, Environmental fingerprinting

3. LANGUAGE ABILITY

	Understanding	Speaking	Reading	Writing
Malagasy	Good	Fluent	Fluent	Good
French	Good	Fluent	Fluent	Good
English	Good	Fluent	Fluent	Good

4. EDUCATION

Year	Disciplines	Institutions	Degrees
2015-2017	Nuclear Physics, Theoretical & Applied Physics	INSTN- Madagascar University of Antananarivo	Habilitation à diriger des Recherches (HDR)
2000-2001	Nuclear Physics, Theoretical & Applied Physics	INSTN- Madagascar University of Antananarivo	Ph.D (Doctorat 3è cycle)
1995-1996	Nuclear Physics, Theoretical & Applied Physics	INSTN- Madagascar University of Antananarivo	M.Sc (DEA)

5. POST-ACADEMIC FELLOWSHIPS AND SCIENTIFIC VISITS

- 05-07/12/2019 Scientific Visit for project design on isotopic techniques to support the development of best agricultural practices for food security.- IAEA, VIC, Vienna, Austria
- 20-24/04/2015 Scientific Visit to follow-up RAF5063 project and to design new project on FRN and related novel techniques.- IAEA, VIC, Vienna, Austria
- 17-21/06/2013 Scientific Visit on Radionuclide Tracing and Environmental Pollution.- LUNDS University, Sweden
- 23/7-3/08/2013 Scientific Visit on Conservation Agriculture and Isotopic Techniques.- IAEA, VIC, Vienna, Austria
- 4-15/01/2010 Scientific Visit on the Use of Fall-out Radionuclides on Soil Erosion Studies.- IAEA Seibersdorf Laboratories, Austria

- Feb-May 2008 Fellowship on the Use of Fall-out Radionuclides on Soil Erosion Studies.- Department of Geography, University of Exeter, UK
- May-Dec. 1999 Fellowship on Advanced Radioanalytical Methods.- Lawrence Livermore National Laboratory (LLNL), California, USA
- Jul. Aug 1997 Fellowship on Instrumental Methods in Radioactivity Measurement.- IAEA Seibersdorf Laboratories, Austria

6. EXPERT DUTIES

- 2017 Expert and Lecturer for the « National Training Course on Environmental Sampling Techniques for Monitoring Purpose», Nouakchott, Mauritania, 6-10 November 2017 (Ref: TN-MAU7002-1701155)
- 2017 Member of International Scientific Committee Member of the “4th African Conference on Quality Management in Nuclear Industry and Research Laboratories”, Addis Ababa, Ethiopia, 9-10 March 2017
- 2016 Expert and Lecturer for the « Iranian National training course on FRNs to assess soil erosion ». IRA 5013 project: Investigating the Effects of Deforestation and Afforestation on Soil Redistribution. Tehran, Iran, 27 Aug to 04 Sept 2016 (Ref: C7-RAF-5.063),
- 2015 Madagascar Delegate as Expert and speaker for the I.A.E.A Side Event « Soil Science for Sustainable Land Management », during the 12th Conference of Parties of the United Nations Convention to Combat Desertification (UNCCD COP12), Ankara, Turkey, 19-21 October 2015
- 2015 Expert and Lecturer for the « Regional Training Courses on FRN Data Treatment and Interpretation with focus on Cs-137 Technique », Rabat, Morocco, 28 Sept – 9 Oct 2015 (Ref: C7-RAF-5.063),
- 2015 Expert and Lecturer for the « Mauritanian National Training Course on Environmental Monitoring and Sample Analysis », Nouakchott, Mauritania, 7-10 September 2015 (Ref: C7-MAU7002-002/15)
- 2013 IAEA/RAF5063 Expert mission in Algeria, to support the use of Fallout Radionuclides to assess the impact of agricultural practice on soil erosion (C7-RAF-5.063-07/13), 27-31 October 2013
- 2012 IAEA/RAF5063 Expert and Lecturer for the « RTC on the Use of Fallout Radionuclides to assess the impact of agricultural practice on soil erosion (Part I) », Tunis, Tunisia, 3-7 December 2012 (C7-RAF-5.063-001/12)
- 2012 IAEA/RAF5063 Expert mission in Zimbabwe, to support the use of Fallout Radionuclides to assess the impact of agricultural practice on soil erosion (RAF5063/02/01), 22-26 October 2012
- 2012 IAEA/RAF5063 Expert missions in Ivory Coast, to support the use of Fallout Radionuclides to assess the impact of agricultural practice on soil erosion (RAF5063/03/01), 01-05 October 2012
- 2012 IAEA/RAF5063 Expert missions in Benin, to support the use of Fallout Radionuclides to assess the impact of agricultural practice on soil erosion (RAF5063/04/01), 03-17 September 2012

7. TRAINING COURSE DIRECTOR AND WORKSHOP ORGANIZER

- 2018 Summer school and Colloquium organizer : École de Nanoscience (NANOMADA) et Colloque international sur la Micro-Nanotechnologie, Antananarivo, Madagascar 5-12 avril 2018.
- 2017 Workshop organiser: Mid-Term Regional Coordination Meeting of the RAF7015 project (Strengthening Regional Capacities for Marine Risk Assessment Using Nuclear and Related Techniques), Nosy-Be, Madagascar, 11-15 December 2017
- 2016 Workshop organiser: Regional Experts Meeting to review/finalize training materials for the sustainability of Nuclear Institutions (RAF0047/9005/01), Antananarivo, Madagascar, 17-21 October 2016
- 2016 Workshop organiser: First Regional Coordination Meeting of the RAF7017 project (Promoting Technical Cooperation among the Radio-analytical Laboratories in the African region for the Measurement of Environmental Radioactivity), Antananarivo, Madagascar, 13-17 June 2016
- 2015 Workshop organiser : Regional Workshop on developing and implementing Standard Operating Procedures (SOPs) for the production of quality products with potentials for income generation, Antananarivo, Madagascar, 09-13 February (IAEA/RAF0042)

- 2013 Course Director: Regional Training Course on the Use of Fallout Radionuclide Based Techniques for Soil Erosion Assessment (Part II), Antananarivo, Madagascar, 18-29 November 2013 (C7-RAF-5.063-002/13)
- 2011 Workshop organiser: Regional Workshop to Assess the Result of NAA Proficiency Test Activities, 05-09 September 2011, Antananarivo, Madagascar (IAEA/RAF4022)

8. SUPERVISOR for FELLOWSHIPS AND SCIENTIFIC VISITORS

SUPERVISOR FOR SCIENTIFIC VISITS

- Mme Etienne DASSI (Benin), 14-17 November 2017 (one week)
 Emmanuel CHIKWARI (Zimbabwe), RAF5063, 03-14 November 2014 (2 weeks)
 Cramer Kaizzi KAYUKI (Uganda), RAF5063, 15-26 September 2014 (2 weeks)

SUPERVISOR FOR FELLOWSHIPS

- Armwell SHUMBA (Zimbabwe), RAF5063, 01 October - 30 November 2014 (2 months)
 Akinson TUMBURE (Zimbabwe), RAF5063, 01 October - 30 November 2014 (2 months)
 Angella NANSAMBA (Ouganda) , RAF5063, 01 August - 31 October (3 months)
 Moses MUBIRU (Ouganda) , RAF5063, 01 July - 30 September 2014 (3 months)
 Wilfrid CHIFAMBA (Zimbabwe), RAF5063, 01 July-14 August 2013 (1,5 months)

9. INVOLVEMENT IN COORDINATED RESEARCH PROJECT (CRP) (as leader)

- 2016-2021 Coordinated Research Project D1.50.17 on “Nuclear Techniques for a Better Understanding of the Impact of Climate Change on Soil Erosion in Upland Agro-ecosystems”

10. INVOLVEMENT IN RESEARCH AND DEVELOPMENT PROJETS (as main or co-coordinator)

ON-GOING

- 2019-2020 Enhancing training and certification schemes, and promoting industrial applications of Non Destructive Techniques (NDT), through collaboration between CNESTEN-Morocco and INSTN-Madagascar.- Under AFRA PROJECT RAF/0/038: Promoting Technical Cooperation Among Developing Countries (TCDC) in Africa through Triangular Partnerships.
- 2016-2019 Promoting Technical Cooperation among the Radio-analytical Laboratories in the African region for the Measurement of Environmental Radioactivity. (IAEA Regional Project RAF/7/017)
- 2016-2017 Promoting the Sustainability and Networking of National Nuclear Institutions for Development, Phase II. (IAEA Regional Project RAF/0/047)
- 2016-2019 Strengthening Regional Capacities for Marine Risk Assessment Using Nuclear and Related Techniques. (IAEA Regional Project RAF/7/015)
- 2016-2019 Enhancing Regional Capacities for Assessing Soil Erosion and the Efficiency of Agricultural Soil Conservation Strategies through Fallout Radionuclides. (IAEA Regional Project RAF/5/075)

PREVIOUS

- 2014-2015 Promoting the Sustainability and Networking of National Nuclear Institutions for Development, Phase I (RAF/0/042)
- 2012-2015 Supporting Innovative Conservation Agriculture Practices to Combat Land Degradation and Enhance Soil Productivity for Improved Food Security (RAF/5/063)
- 2012-2013 Improving the Use of Agricultural Resources and Combating Soil Erosion by Optimising Conservation Agriculture and Developing Strategies for Its Dissemination (MAG/5/019)
- 2009 - 2013 Enhancing Research Reactor Utilization and Safety. IAEA Regional Project (RAF/4/022)

- 2007 - 2010 Use of environmental radio-isotopes for soil erosion and sedimentation assessment, supporting land management, in the province of Antananarivo, Madagascar. Madagascar-IAEA Technical Co-operation Project (MAG/5/014)
- 2009 - 2010 Support to National Quality Management. Madagascar-IAEA Technical Co-operation Project (MAG/8/007)
- 2007 - 2009 Nutritional and Health Related Studies Using Research Reactors. IAEA Regional Project (AFRA-RAF/4/020)
- 2007 - 2008 Establishment of National Quality Control Standard for Foodstuff. Madagascar-IAEA Technical Co-operation Project (MAG/8/005)
- 2003-2004 Strengthening the Madagascar-INSTN Analytical Data Management. Madagascar, Ministry of Higher Education, FADES Project (SP03v2_18)
- 2003-2007 Quality Management Schemes supporting Nuclear and Related Technologies. IAEA Regional Project (RAF/4/018 – AFRA IV/9).
- 2000-2004 Effects of Air and Water Pollution on Human Health. Madagascar-IAEA Technical Co-operation Project IAEA Project (MAG-7/002).
- 2000-2004 Environmental Pollution Assessment by a Multi-disciplinary Study. Madagascar, Higher Education Ministry, FADES Project (SP99v1b_21)
- 1998-2000 Environmental Radioactivity Study of Antananarivo City. Madagascar, Ministry of Higher Education, Research Program Contract
- 1995-1997 Strengthening Nuclear Analytical Techniques. Madagascar-IAEA Technical Co-operation Project (MAG/2/002)

11. CONSULTANT ACTIVITIES

NATIONAL

- 2011 Consultant for the baseline radiation level assessment in an U-Th exploration perimeter, Tsiroanomandidy, Region of Bongolava, Madagascar. – For the VARUN International, June 2011.
- 2010 Consultant for the radiation level assessment in a heavy mineral sands mining perimeter, Anjahambe, region of Analanjirofo, Madagascar. For the Mainland Mining Limited (MML), December 2010.
- 2009 Consultant for the baseline radiation level assessment in an U-Th exploration perimeter, regions of Vakinankaratra, Ihorombe and Anosy, Madagascar. – For the Madagascar Energy Corporation (MEC), November-December 2009.
- 2007 Consultant for the baseline radiation level assessment in a heavy mineral sands mining perimeter, Anjahambe, region of Analanjirofo, Madagascar. For the Mainland Mining Limited (MML), December 2007.
- 2007 Consultant for the baseline radiation level assessment in an U-Th exploration perimeter, Esira-Mahaly-Tsivory, region of Anosy, Madagascar. For the Madagascar Mineral Field (MMF), October 2007.
- 2007 Consultant for the baseline radiation level assessment in an U-Th exploration perimeter, Ambatofotsy, Mahavelona, region of Itasy, Madagascar. For the Pencari Betafo S.a.r.l., August 2007.
- 2006 Consultant for the radioactivity level assessment at the DYNATEC Cobalt exploitation site, Ambatovy, region of Alaotra-Mangoro, Madagascar. For the DYNATEC company, October 2006
- 2006 Consultant for the baseline radiation level assessment in an U-Th exploration perimeter, Tranomaro, region of Anosy, Madagascar. For the Madagascar-PAM-Atomique (Pan African Mining Company), July 2006.
- 2006 Consultant for the impact assessment of old U-Th (Urano-thorianite) mining activities to consumption water, Tranomaro, region of Anosy, Madagascar. For the Nan Tin Polychrome Company, June 2006.
- 2003 Consultant for the Evaluation of Air pollution from urban traffics of Antananarivo city. Under contract with Louis Berger Int. Inc. (Aug 2003 – Oct 2003)

- 2001 Consultant for the evaluation of the Social & Environmental Impact Study (SEIS) of a future heavy mineral sands mining industry: radioactivity and air quality aspects, in the region of Anosy, Madagascar. For the Quit Madagascar Minerals (QMM), May - November 2001.

IAEA

- 2007 National Consultant at the IAEA Technical Meeting: Stratégies de Remédiation de l'Environnement dans un Contexte de Ressources Limitées (TM-33749). Vienna, Austria, 01-05 October 2007.
- 2006 National Consultant at the IAEA Technical Meeting on Radiation Safety in the Scrap Metal and Recycling Industry (TM-29285). Vienna, Austria, 11-13 December 2006
- 2006 Member of the Malagasy delegate assisting the IAEA Seminar on the role of State Systems of Accounting for and Control of Nuclear Material in implementing safeguards in States with Comprehensive Safeguards Agreements and with Small Quantities Protocols. Vienna, Austria, 14-17 February 2006
- 2004 Invited IAEA (International Atomic Energy Agency) consultant at the Technical Meeting on the Investigation of Radioactive Source Designs to Minimize the Consequences of Malicious Use (TM-26670). Vienna, Austria, 30 Aug 2004 - 02 Sept 2004

12. CONFERENCE

- 2013 Participant at the International Symposium on Managing Soils for Food Security and Climate Change Adaptation and Mitigation, Vienna, Austria, 23-26 July 2012
- 2009 Speaker at the International Conference on Control and Management of Inadvertent Radioactive Material in Scrap Metal. Tarragona, Spain, 23-27 February 2009
- 2007 Speaker at the International Conference on Environmental Radioactivity: From Measurements and Assessments to Regulation.- Vienna, Austria, 23-27 April 2007
- 2005 Speaker at the First African Conference on Quality Management in Nuclear Industry and Research Laboratories, Mauritius, 17 – 18 March 2005
- 2004 Speaker at the National Workshop on Quality Management Basics, 22-26 Mars, 2004, Antananarivo, Madagascar.

13. PUBLICATIONS ET COMMUNICATIONS

- 2017 Effect of Tillage and Mulching on soil Water Erosion in Linsinlin Watershed, Centre Benin.- Journal of Experimental Biology and Agricultural Sciences, August - 2017; Volume – 5(4) (2017).
- 2017 On the presence of plutonium in Madagascar following the SNAP-9A satellite failure.- Journal of Environmental Radioactivity 177 (2017)
- 2017 Étude, à travers deux cas, des risques d'ensablement des réservoirs hydroélectriques des hautes terres de Madagascar, par l'utilisation des radio-isotopes Pb-210 et le Cs-137.- Afrique SCIENCE 13(4) (2017)
- 2016 Assessment of soil redistribution rates by ^{137}Cs and $^{210}\text{Pb}_{\text{ex}}$ in a typical Malagasy agricultural field.- J. Environ. Radioact. 152 (2016) 112-118.
- 2015 Fallout of Pu-238 Over Madagascar Following the Snap 9A Satellite Failure. In Environmental Radiochemical Analysis V, Ed. Royal Society of Chemistry Special Publication n°351, 2015.
- 2015 Assessment of the level of soil degradation in three watersheds affected by intensive farming practices in Benin.- J. Exp. Bio. Agric. Sc., Dec. - 2015; Volume – 3(6).]
- 2015 Contribution à l'étude de dose due à la radioactivité gamma du sol sur la rive de la baie des Français, Antsiranana, Madagascar.- Afrique Science 11(1) (2015) 122-135.
- 2014 Contribution à l'étude de la radioactivité gamma du sable des plages de Ramena et d'Orangea, Antsiranana, Madagascar. Afrique Science 10(4) (2014) 23-35.

- 2013 Crystallographic study of uranium-thorium bearing minerals in Tranomaro, south-east Madagascar.- Journal of Mineral and Material Characterisation (JMMC).- Ed. SClentific Research Publishing (SCIRP).- Nov 2013
- 2012 Use of FRN Techniques (Cs-137 and Pb-210ex) to Document Soil Erosion and Soil Redistribution on Manually-tilled Hillslopes in the Madagascar Highland.- Proceedings of the International Symposium on Managing Soils for Food Security and Climate Change Adaptation and Mitigation, Vienna, Austria, 23-26 July 2012
- 2010 Preliminary study of a radiological survey in an abandoned uranium mining area in Madagascar.- Proceedings of the International Conference of the European Geophysical Union.- Vol. 12, EGU2010-3155, 2010, EGU General Assembly 2010.
- 2009 Top soil radioactivity assessment in a high natural radiation background area: The case of Vinaninkarena, Antsirabe –Madagascar. Appl. Radiat. Isot. 66, 1619-1622. 2009
- 2009 Investigating the spatial anisotropy of soil radioactivity in the region of Vinaninkarena, Antsirabe— Madagascar.- Proceedings of the 4th High-Energy Physics International Conference, 21-28 August 2009 (HEP-MAD 09), Antananarivo, Madagascar.
- 2006 Le Paramètre Radioactif et la Qualité de l'Eau à Madagascar.- Oral Communication, Atelier de Présentation du Consortium de Laboratoires d'Analyses et des Centres de Recherche de l'Eau.- 16-17 November 2006, Antananarivo, Madagascar.
- 2005 La Radioactivité et la Qualité des Matériaux de Construction.- Oral Communication, Atelier Régional sur les Recherches en Génie Energétique et Génie de l'Environnement, 07-08 July 2005, Antananarivo, Madagascar
- 2005 Évaluation des Risques d'Exposition à la Radioactivité, liés à l'Occupation des Sols, à Antsirabe et Vinaninkarena, Madagascar.- Proceedings of the Forum de la Recherche.- 30 March– 1 April 2005, Toamasina, Madagascar,
- 2005 The Challenge of Developing Quality Management System in Hostile Environment: the Madagascar Case. - Proceedings of the First African Conference on Quality Management in Nuclear Industry and Research Laboratories. - 17-18 Mars 2005, Mauritius Island.
- 2004 Radon Progenies as a Source of Alpha-Beta Radioactivity in Drinking Water in Vinaninkarena, Antsirabe-Madagascar.- Proceedings of the HEPMAD 04 International Conference, 27 September – 01 october 2004, Antananarivo, Madagascar.
- 2001 Environmental Ionising Radiation Study: Assessment of the Public Exposure to the Environmental Gamma and X Rays, and to Radon in Antananarivo City. Proceedings of the First High-Energy Physics Conference (HEPMAD 01), Antananarivo.- 27 september – 05 october 2001,.
- 2001 Evaluation de la Dose d'Exposition au Public, par les rayonnements X, Gamma et le Radon Atmosphérique dans la ville d'Antananarivo.- Oral Communication, Journées de la Recherche.- 30-31 october 2001, Mahajanga, Madagascar.
- 2001 Analyse Multi-groupe des Spectres Gamma : Application à l'Etude de la Radioactivité des Sols.- Thèse de Doctorat de 3è cycle.- Université of Antananarivo, Madagascar, 2001.
- 2000 Pollution de la Ville d'Antananarivo par le Radioisotope Artificiel Césium-137.- Bull. Acad. Natn. Art. Let. Sci.- Tome 75/1-2, 1998 (2000).
- 2000 Contamination Radioactive des Denrées alimentaires à Madagascar : cas des laits en poudre importés.- Bull. Acad. Natn. Art. Let. Sci.- Tome 75/1-2, 1998 (2000).
- 1999 Review of Ra-226, Ra-228 Intercomparaison Study for Oil and Gas Industry.- Proceedings of the Bioassay, Analytical & Environmental Radiochemistry (BAER'99) 45th Annual Conference.- NIST, Gaithersburg, MD, USA, 18-22 octobre 1999.
- 1999 Etude sur l'Exposition aux Rayonnements Ionisants de la Ville d'Antananarivo.- Best Poster, Journées de la Recherche, 12 avril 1999, Fianarantsoa, Madagascar.
- 1996 Contrôle de Contamination Radioactive des Denrées Alimentaires par Spectrométrie Gamma.- Mémoire de DEA.- 1996, Université of Antananarivo, Madagascar.