



Europass Curriculum Vitae

Personal information

Surname(s) / First name(s) **CHIHAIIA Rares - Andrei**
Address(es) 16 Colentina Str., district 2, Bucharest, Romania
Telephone(s) 0040 726 637 598
E-mail rares_contact@icpe-ca.ro
Nationality Romanian
Date of birth 30.09.1986
Gender Male

Occupational field **Engineering**

Work experience

Dates April 2011 – present
Occupation or position held Scientific Researcher
Main activities and responsibilities Research, Development and Design in Renewable Energy Field
Name and address of employer National Institute for R&D in Electrical Engineering ICPE-CA; 313 Unirii Blvd, Avenue, district 3, Bucharest Romania
Type of business or sector Research and development

Education and training

Dates October 2012 – December 2015
Title of qualification awarded PhD Studies within Technical University of Civil Engineering Bucharest, Doctoral School in the field of Hydrotechnical engineering
Principal subjects/occupational skills covered Hydropower plants, water turbines
Name and type of organisation providing education and training Technical University of Civil Engineering Bucharest
Faculty of Hydrotechnical Engineering

Dates October 2009 – February 2011
 Title of qualification awarded Masters degree in Hydropower Engineering
 Principal subjects/occupational skills covered Hydropower plants, water turbines
 Name and type of organisation providing education and training University Politehnica Bucharest
 Power Engineering Faculty
 Level in national or international classification Master of Science - Engineer

Dates October 2005 – July 2009
 Title of qualification awarded Engineer
 Principal subjects/occupational skills covered Hydropower Systems
 Name and type of organisation providing education and training University "Politehnica" Bucharest
 Power Engineering Faculty
 Level in national or international classification Bachelor of Science - Engineer

Personal skills and competences

Mother tongue(s) **Romanian**

Self-assessment
 European level (*)

english

french

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user

(*) Common European Framework of Reference for Languages

Social skills and competences Team Spirit
 Sociable, Communicative Person
 Flexibility and ability to work under Stress

Technical skills and competences Telecom Technician Certified

Computer skills and competences

- Office (Word, Excel, Power Point)
- AutoCAD

Other skills and competences Perseverance
 Seriousness

Driving license Category B vehicle

Additional information Faculty Group Practice:
 DEN, CET Vest, Portile de fier I and II

Annexes

A1 - Representative list of papers; A2 - Representative Scientific Activities and Responsibilities
 A3 – Patent Applications

A1 – Representative List of papers

1. **Rareș - Andrei CHIHAIA**, Corneliu MĂLĂNCIOIU, Nicolae TĂNASE, Andreea MITULEȚ, Lucian MĂNDREA, „The flow improvement within the vertical wells of the secondary intakes”, The 4th European & International Conference eRENEWABLIA, eHYDROGENIA, eEFFICIENCIA, September 20-21, 2011, Bucharest, ROMANIA, Academia Română, AULA MAGNA, Calea Victoriei, 125 ISBN-10: 973-1704-17-5, ISBN-13: 978-973-1704-17-3.
2. Mihai Gheorghe MIHĂIESCU, Dorian MARIN, Victor STOICA, Sergiu NICOLAIE, **Rareș-Andrei CHIHAIA**, "Synchronous machine with dual excitation", The 4th European & International Conference eRENEWABLIA, eHYDROGENIA, eEFFICIENCIA, September 20-21, 2011, Bucharest, ROMANIA, Academia Română, AULA MAGNA, Calea Victoriei, 125 ISBN-10: 973-1704-17-5, ISBN-13: 978-973-1704-17-3.
3. Lucian MĂNDREA, **Rareș - Andrei CHIHAIA**, Florentina BUNEA, Gabriela OPRINA, Gheorghe VOICU, Constantin IVAN, " The modernisation of the secondary intakes Draxin and Cascoe", The 5th International Conference on ENERGY and ENVIRONMENT (CIEM), November 3-4, 2011, Bucharest, ROMANIA, University POLITEHNICA of Bucharest, Splaiul Independentei 313.
4. Mihail POPESCU, Gabriela OPRINA, Sergiu NICOLAIE, Lucia - Andreea MITULEȚ, **Rareș - Andrei CHIHAIA**, „ICPE-CA (ECCE), Realizări și direcții de dezvoltare în domeniul conversiei energiei” - *Achievements and directions of development in the field of energy conversion*, Simpozionul de Mașini electrice SME'12, 23 Noiembrie 2012 București, ISSN 1843-5912.
5. Mihail POPESCU, Lucia - Andreea MITULEȚ, **Rareș - Andrei CHIHAIA**, Sergiu NICOLAIE ș.a., “*Finite Element Analysis of a Low Speed Permanent Magnets Synchronous Generator with Direct Drive*”, The 8th International Symposium on ADVANCED TOPICS IN ELECTRICAL ENGINEERING, May 23-25, 2013, Bucharest, ISSN: 2068-7966, ISBN: 978-1-4673-5978-8, IEEE Catalog Number CFP1314P-CDR.
6. Mihail POPESCU, Gabriela Oprina, Lucia - Andreea MITULEȚ, Sergiu NICOLAIE, **Rareș - Andrei CHIHAIA**, ș.a., “*Aspects Regarding the Application of Electric Generators to Wind Energy Conversion Using Counter Rotating Turbines*”, The 8th International Symposium on ADVANCED TOPICS IN ELECTRICAL ENGINEERING, May 23-25, 2013, Bucharest, ISSN: 2068-7966, ISBN: 978-1-4673-5978-8, IEEE Catalog Number CFP1314P-CDR.
7. Măndrea L., Bunea F., **Chihaia R.**, „*The calculus of the depression in swirling flow*”, 6th International Conference on Energy and Environment CIEM2013, Section 6 – Fluid Mechanics and Application, Bucharest, Romania, 7-8 November 2013, poziția pe CD S6_3, Ed. Politehnica Press, ISSN 2067-0893.
8. Andreea Mituleț, Mihail Popescu, Sergiu Nicolaie, Gabriela Oprina, **Rareș-Andrei Chihaia**, „*Studiu privind implementarea unor metode de eficientizare a instalațiilor eoliene*”, The 12th WEC CENTRAL & EASTERN EUROPE REGIONAL ENERGY FORUM - FOREN 2014, USB ISSN 2284-9505, 22-26 Iunie 2014, București, România.
9. Lucian MĂNDREA, Corneliu MĂLĂNCIOIU, **Rareș Andrei CHIHAIA**, Nicolae TĂNASE „*Creșterea siguranței în exploatarea a barajului Izvoru Muntelui prin modernizarea echipamentelor hidromecanice ale golirilor de fund*”, a XIV-a Conferință internațională multidisciplinară "Profesorul Dorin PAVEL - fondatorul hidroenergeticii românești" Sebeș - Alba, 6-7 iunie 2014, articol publicat în revista *Știință și Inginerie* vol.25 /2014, pg. 221-230, ISSN: 2067-7138;
10. Mihail POPESCU, Tiberiu TUDORACHE, Daniel ILINA, **Rareș Andrei CHIHAIA**, “*Sistem de propulsie electrică pentru vehicule ușoare*”, Simpozionul de mașini electrice SME'14 – 3 octombrie 2014, poziția 11 pe CD, ISSN:1843-5912 ;
11. Mihail POPESCU, Sergiu NICOLAIE, Gabriela OPRINA, Radu CÎRNARU, Andreea MITULEȚ, **Rareș CHIHAIA**, Radu MIREA, „*Improving the Energy Conversion Efficiency of Counter Rotating Wind Turbines by Using Innovative Generators*”, Proceedings of 21st edition of International Conference of Hydraulics, Pneumatics, Tools, Sealing elements, fine mechanics, specific electronic equipment & mechatronics – HERVEX 2014, 5-7 noiembrie, Călimănești – Căciulata, ISSN 1454-8003, pp. 249-254.
12. Mituleț, L.A., Oprina, G., **Chihaia, R.A.**, Nicolaie, S., Nedelcu, A., Popescu, M. (2014) *Wind tunnel testing for a new experimental model of counter-rotating wind turbine*, Annals of DAAAM International for 2014, volume 25, no. 1 & Collection of Working Papers for 25th DAAAM International

Symposium, ISBN 978-3-901509-99-5, ISSN 2304-1382, CDROM version, Editor B. Katalinic, Published by DAAAM International, Vienna, Austria, EU, 2014.

13. L. Pîslaru-Dănescu, A.M. Morega, M. Morega, **R. Chihai**a, M. Popa, L. Flore, “*Electronic Drive System of a Linear Magnetostrictive Motor Designed for Outer Space Applications*”, THE 9th INTERNATIONAL SYMPOSIUM ON ADVANCED TOPICS IN ELECTRICAL ENGINEERING, May 7-9, 2015, Bucharest, Romania, ISSN: 2068-7966 ;
14. Lucian Mândrea, **Rareș-Andrei Chihai**a, Ileana Popa, “*Determinarea solicitărilor prizelor de apă cu conducte înglobate în pile*”, A XV-a Conferință Internațională Multidisciplinară Profesorul Dorin Pavel-fondatorul hidroenergeticii românești”, Sebeș – Alba, 5-6 iunie 2015, articol publicat în revista *Știință și Inginerie* vol.27 /2015, pg. 391-396, ISSN: 2067-7138;
15. Lucian Pîslaru-Dănescu, Mihail Popescu, **Rareș – Andrei Chihai**a, Sergiu Nicolaie, „*Aționarea motoarelor asincrone de mare turație de uz general cu utilizarea convertizoarelor de frecvență*”, Revista Automatizări și Instrumentație nr.2 / 2015, ISSN 1582-3334;
16. **CHIHAI**A Rareș Andrei, Evaluarea caracteristicilor hidraulice pentru un grătar Coandă în cazul utilizării la captările secundare cu prize tiroleze – Buletinul științific al Universității Tehnice de Construcții București, Nr. 3-4 / 2015, L-ISSN: 1224-628X;
17. **CHIHAI**A Rareș Andrei, *Comportarea în exploatare a prizelor de apă în regim de ape mari*, Revista Hidrotehnica nr.7-8 /2015, ISSN: 0439-0962;
18. Voinea, A., Mândrea, L., Oprina, G., Băbuțanu, **Chihai**a R, *Innovative intake for sand-less water solution for river management* - 8th. International Conference On Environmental Engineering and Management S2-P7, 9-12 Sept.2015, Iași, România;
19. **Rareș Andrei Chihai**a, Lucia-Andreea El-Leathey, Gabriela Oprina, Sergiu Nicolaie, Radu Mirea, ș.a, “*Implementation Analysis of an Ecological Transport System in Călărași - Silistra Border Area*”, Proceedings of the Union of Scientists - Ruse Sixth International Conference, Ruse-Bulgaria, 11-12 November 2015, ISSN 1311-9974, pp. 360-371;
20. Sergiu Nicolaie, Gabriela Oprina, **Rareș - Andrei CHIHAI**A, Lucia – Andreea El-Leathey, Radu Mirea ș.a., “*Alternative Improved Accessibility accros the Danube in Calarasi-Silistra Cross-Border Area*”, Proceedings of the Union of Scientists - Ruse Sixth International Conference, Ruse-Bulgaria, 11-12 November 2015, ISSN 1311-9974, pp. 770-777;
21. Mituleț L.A., Nedelcu A., Nicolaie S., **Chihai**a R.A., “*LabVIEW Design and Simulation of a Small Scale Microgrid*”, UPB Sci. Bull., Series C, Electrical Engineering and Computer Science, Vol. 78, Iss. 1, 2016, ISSN 2286-3540, pp. 235-246.
22. L.A. El-Leathey, L. Pîslaru-Dănescu, S. Nicolaie, **R. A. Chihai**a, A. Nedelcu, “*Assessment of Wind Energy Density Probability by Using the Weibull Distribution Function. A Study Case*”, 16th International Multidisciplinary Scientific GeoConference & Expo SGEM 2016, 28 iunie – 6 iulie 2016, Albena, Bulgaria, pp. 147 – 154, ISBN 978-619-710-63-6, ISSN 1314-2704;
23. **R. A. Chihai**a, L.A. El-Leathey, S. Nicolaie, F. Bunea, G. Oprina, “*Study Regarding the influence of Orifice Diameter on an Ecological Water Intake*”, 16th International Multidisciplinary Scientific GeoConference & Expo SGEM 2016, 28 iunie – 6 iulie 2016, Albena, Bulgaria, pp. 669-676, ISBN 978-619-710-63-6, ISSN 1314-2704;
24. **Rareș-Andrei CHIHAI**A, Gabriela OPRINA, Sergiu NICOLAIE, Andreea EL-LEATHEY, Corina BĂBUȚANU, Adrian NEDELICU, „*Assessing the blade chord length influence on the efficiency of a horizontal axis hydrokinetic turbine*”, Proceedings of 2016 International Conference on Hydraulics and Pneumatics – HERVEX, November 9-11, Baile Govora, Romania, ISSN 1454 – 8003.
25. Lucian Pîslaru-Dănescu, Elena Chițanu, **Rareș-Andrei Chihai**a, Dorian Marin, Lucia-Andreea El-Leathey, Virgil Marinescu, Beatrice Gabriela Sbârcea, Corina Alice Băbuțanu, *New Harvesting System Based on Photovoltaic Cells with Antireflexive ZnO Nanoparticles Coatings and DC/DC Isolation Conversion*, Proceedings of the 2016 4th International Symposium on Environmental Friendly energies and applications (EFEA), Univ Belgrade, Elect Engn Inst Nikola Tesla, Belgrade, SERBIA, 14-16 sept. 2016, ISBN:978-1-5090-0748-6.
26. Oprina G., **Chihai**a R.A., El-Leathey L.A., Nicolaie S., Băbuțanu C., Voina A., *A review on counter-rotating wind turbines development*”, comunicată în cadrul *Conferinței de inginerie energetică CIE* 2016, 2-4 iunie, Oradea, România, publicată în *Journal of Sustainable Energy*, vol. 7, nr. 3, 2016, pp.71-78, ISSN 2067-5534.

27. El-Leathey (Mituleț) L.A., Nicolaie S., **Chihai R.A.**, Oprina G., “*Technical Economic Analysis of a Small-Scale Microgrid for a Specific Location*”, Electrotehnică, Electronică, Automatică (EEA), nr. 3/2016, pp. 134-140, ISSN 1582-5175.
28. L.A. El-Leathey, A. Nedelcu, R.A. Chihai, G. Oprina, S. Nicolaie, D. Marin, Efficiency “*Assessment of an Urban Area Grid Connected PV Power Plant*”, The 10th International Symposium on Advanced Topics in Electrical Engineering March 23-25, 2017, Bucharest, Romania, DOI: 10.1109/ATEE.2017.7905152, Publisher: IEEE.
29. E. Chițanu, L. Pîslaru-Dănescu, L.A. El-Leathey, D. Marin, **R.A. Chihai**, ș.a., “*Improvement of polycrystalline solar cells operation under low solar radiation conditions by using ZnO nanostructured materials*”, The 10th International Symposium on Advanced Topics in Electrical Engineering March 23-25, 2017, Bucharest, Romania, DOI: 10.1109/ATEE.2017.7905074, Publisher: IEEE;
30. Bunea F., Ciocan G.D., Nedelcu A., Bucur D.M., Dunca G., **Chihai R.**, Experimental setup for the study of new aeration devices in hydraulic turbines, Environmental Engineering and Management Journal, May 2017, Vol.16, No. 5.
31. **R.A. Chihai**, F. Bunea, G. Oprina, L.A. El-Leathey, “*Power Prediction Method Applicable to Horizontal Axis Hydrokinetic Turbines*”, The 8th International Conference on Energy and Environment, 19 - 20 October 2017, Bucharest, Romania, ID044.

A2 - Scientific Activities and Responsibilities

Representative projects

No.	Position	Title	Financing	Year
1.	Project Responsible	"The flow improvement within the secondary intakes Draxin and Cascoe (Clabucet Hydroelectric Plant)"	Hidroelectrica S.A	2011
2.	Project Responsible	" Wind energy conversion system with an output of 1.5 kW "	UEFISCDI and ROFEP SA Urziceni	2012
3.	Project Responsible	"Analysis of the climatic factors regarding the renewable energy recovery for Dambovita and Ialomita river basins"	Dambovita County Council	2012

A3 – Patent Applications

- OSIM A/00478 /27.06.2012:– Jaw Valve, Inventors: Corneliu MĂLĂNCIOIU, **Rareș - Andrei CHIHAIA**, Nicolae TĂNASE, Ionel CHIRIȚĂ, Sergiu NICOLAIE ;
- OSIM A/00865/23.11.2012: Hydropower unit for hydraulic energy conversion extracted from watercourses, Inventors: MIHAIESCU Gheorghe Mihai, POPESCU Mihail, NICOLAIE Sergiu, OPRINA Gabriela, CHIRIȚĂ Ionel, TĂNASE Nicolae, **CHIHAIA Rareș – Andrei**, MITULEȚ Lucia – Andreea, NEDELICU Adrian.
- OSIM A/00879/17.11.2014: Magnetostriptive liniar motor”, Inventors: PÎSLARU-DĂNESCU Lucian, POPA Marius, BUNEA Florentina, **CHIHAIA Rareș – Andrei**, MOREGA Alexandru-Mihail, Morega Mihaela, GABOR Dumitrița; FLORE Lică, POPESCU Ionel;
- OSIM A/00201/18.03.2015: “Water intake embedded in a sluice gate”, Inventatori: **CHIHAIA Rareș – Andrei**, Lucian Mândrea, Gabriela Oprina, Andreea Mituleț, Nicolae Tănase;
- OSIM A/00874/23.11.2015: “Piezoelectric rotational motor”, Inventors: PÎSLARU-DĂNESCU Lucian, POPA Marius, BĂBUȚANU Corina-Alice, **CHIHAIA Rareș – Andrei**, MOREGA Alexandru-Mihail, Morega Mihaela, FUIOREA Ion, FLORE Lică, GABOR Dumitrița;
- OSIM A/00713/7.10.2016: „Nanofluid planar transformer”, Inventors: PÎSLARU-DĂNESCU Lucian, POPA Marius, ILIE Cristinel, **CHIHAIA Rareș – Andrei**, BĂBUȚANU Corina-Alice, NICOLAIE Sergiu, BUNEA Florentina.
- OSIM A/01020/19.12.2016 “ Transverse geometry used for electric machines with permanent magnets and axial air gap: Inventors: POPESCU Mihail, **CHIHAIA Rareș -Andrei**, TĂNASE Nicolae, EL-LEATHEY Lucia-Andreea, OPRINA Gabriela, NICOLAIE Sergiu.
- OSIM A/00887/30.10.2017: „ Electric machine with permanent magnets and conical air gap”, POPESCU Mihail, DUMITRU Constantin, TĂNASE Nicolae, **CHIHAIA Rareș -Andrei**, EL-LEATHEY Lucia-Andreea, OPRINA Gabriela.