

ИЗБОРНОМ ВЕЋУ ЕЛЕКТРОТЕХНИЧКОГ ФАКУЛТЕТА УНИВЕРЗИТЕТА У БЕОГРАДУ

Изборно веће Електротехничког факултета Универзитета у Београду на својој 837. седници од 12.03.2019. године именовало нас је за чланове Комисије за избор др Марка Ривере у звање гостујућег професора. Проучили смо материјал који нам је био на располагању и част нам је да Изборном већу поднесемо следећи

ИЗВЕШТАЈ

Биографски подаци

Проф. др Марко Ривера је рођен 3. фебруара 1982. год у Чилеу. Дипломирао је и магистрирао на Електротехничком факултету Универзитета Концепсион (*Universidad de Concepción*) у Чилеу 2007. и 2008. године, респективно. Докторирао је на Електротехничком факултету Универзитета Техника Федерико Санта Марија (*Universidad Técnica Federico Santa María*) у Валпараизу (*Valparaíso*) у Чилеу 2011. године уз стипендију чилеанског истраживачког фонда CONICYT. На истом факултету, током 2011. и 2012. године, радио је као истраживач на после докторским студијама и као хонорарни предавач. Његова научно истраживачка интересовања обухватају матричне енергетске претвараче, предиктивно и дигитално управљање електромоторним погонима великих снага, енергетске претвараче са четири гране и развој управљачких платформи високих перформанси које се заснивају на примени интегрисаних кола са унутрашњом структуром, која се може конфигурисати од стране крајњег корисника (FPGA). Он је тренутно ангажован на Електротехничком факултету Универзитета Талка у Кјурику у Чилеу (*Universidad de Talca, Curicó, Chile*), на коме је основао лабораторију за енергетске претвараче, у оквиру које је покренуо групу предмета у датој области и био ментор у изради бројних дипломских радова и мастер теза, као и два доктората. Посебно треба истаћи богату међународну сарадњу проф. Ривере који је гостовао на више познатих светских универзитета као предавач (University of Nottingham, UK; Aalborg University, Denmark; Swiss Federal Institute of Technology in Zurich (ETHZ), Switzerland; Université de Toulouse – ENSEEIHT/ INPT, France; University College Cork, Ireland; Technische Universität München, Germany; University of Lüneburg, Germany; Universidad Nacional de Asunción, Paraguay; Nanyang Technological University (NTU), Singapore; Iran University of Science and Technology (IUST), Tehran, Iran; University of New South Wales, Sydney, Australia; Tecnológico de Monterrey (TEC), Mexico; Ryerson University, Toronto, Canada; University of Belgrade, Serbia, и др.), а на основу које су проистекле бројне публикације и сарања на изради докторских теза. У складу са тим, председавао је бројним секцијама у оквиру међународних конференција, а такође је председавао на седам међународних конференција у Чилеу.

Професор Ривера је 2013. године добио награду Чилеанске академије наука за најбољу докторску дисертацију (*Premio Tesis de Doctorado Academia Chilena de Ciencias 2012*). Поред тога, професор Ривера је 2015. године награђен наградом за изузетне инжењере (*Premio AIE IEEE Ingeniero Sobresaliente 2015*), коју додељује Удружење инжењера електронике и електротехнике у индустрији и Међународни институт инжењера електротехнике и електронике из секције у Чилеу (*Association of the Electrical and Electronics Industry and the International Institute of Electrical and Electronics Engineers – Chile Section*), а такође је добитник више награда за најбољи рад презентован на међународној конференцији.

Резултати његовог релативно кратког, али врло интензивног научног и наставног деловања, вишеструко превазилазе услове за избор редовног професора прописане на Универзитету у Београду у погледу броја објављених научних радова у реномираним часописима, броја цитата, обима реализованих пројеката и председавања бројним међународним конференцијама, међу којима вреди посебно истаћи:

- **60 радова** у међународним научним часописима;
- **226 радова** на конференцијама;
- активно чланство у Управном одбоу IEEE PELS-а у ширем саставу (Јан. 2018 - Јан. 2021.), који је одговоран за управљање и администрирање Друштва, усвајање стратешких и развојних планова за активности PELS-а, одобравање планова за публикације и именовање главних уредника IEEE часописа под покровитељством PELS-а.
- **h-index: 26** (SCOPUS);
- **број цитата: 3437** (SCOPUS)
- гост уредник у 5 специјалних издања врхунских међународних научних часописа.

Научна интересовања проф. Марка Ривере се односе на област енергетских претварача, на управљање и примену у обновљивим изворима енергије, којима се Катедра за енергетске претвараче и погоне Електротехничког факултета у Београду бави у наставном и истраживачком смислу, а за коју се очекује да ће у дужем временском периоду представљати врло актуелну област, тако да би проф. Ривера био ангажован у следећим активностима:

- вођење студената у научно-стручном и студијско-истраживачком раду на академским студијама III степена;
- држање предавања по позиву на теме за које постоји обострано интересовање;
- подстицање рада на публикавању публикација од високе важности;
- учешће у заједничким научно-истраживачким пројектима.

Научно стручни радови:

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ПРОЈЕКТИ

- Contest to Attract Advanced Human Capital from Abroad, Short Stay Programs (MEC80180097). Strengthening of the Undergraduate and Postgraduate Teaching and Research in the Electrical Engineering Area for Renewable Energy Applications. Invited Professor: Prof. Pericle Zanchetta. The University of Nottingham, UK. 2018-2019.
- UNNC Visiting Scholars Scheme. Funding to spend 1 month at The University of Nottingham Ningbo - China, February, 2019.
- Power Electronics for Renewable Energy Systems Applications. Regional Institutional Skills Development. Partners: The University of Nottingham, UK - Universidad Tecnológica de Pereira, Colombia - Universidad de Concepción.
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- Academic Project "Maestría en Ingeniería Electrónica – Énfasis en Energías Renovables y Eficiencia Energética". Universidad del Cono Sur de las Américas (UCSA), Paraguay – Universidad de Talca, Chile.
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- Communication Skills Workshops. Newton Picarte Fund. British Council. May 2016. Course Coordinator.
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- Flexible Energy Management Strategies for Microgrid Clusters and Generation Systems Based on Multiport Modular Power Converter Structures, FONDECYT REGULAR 1160690. 2016-2019, Principal Researcher: Prof. Marco Rivera, Co-Researchers: Prof. Roberto Cárdenas (UdeChile), Prof. Rubén Peña (UdeC).
- Contest to Attract Advanced Human Capital from Abroad, Short Stay Programs (80150056). Strengthening of Teaching and Research in Power Electronics for Renewable Energy Applications. Invited Professor: Prof. Patrick Wheeler. The University of Nottingham, UK. 2016-2017.
- Power Electronics for Renewable Energy Systems. Institutional Skills Development - British Council. 2015-2016. Responsible Researcher.
- Analysis, Design and Implementation of New Active Filter-Based Compensation Systems for the Improvement of Power Quality. 14-INV-096. Development of Scientific Research (Fomento a la Investigación Científica) of the Paraguayan Program for the Development of Science and Technology (Proyecto Paraguayo para el Desarrollo de la Ciencia y Tecnología) - PROCENCIA. 2015-2017. Associate Researcher.
- Development and Implementation of New Converter Topologies for the Matrix Converters for Grid Interconnection with Generation Systems Based on Renewable Energies. 14-INV-097. Development of Scientific Research (Fomento a la Investigación Científica) of the Paraguayan Program for the Development of Science and Technology (Proyecto Paraguayo para el Desarrollo de la Ciencia y Tecnología) - PROCENCIA. 2015-2017. Associate Researcher.
- Development and Efficiency Analysis of New Control Algorithms Focused on the Six-Phase Generator in Wind Power Applications. 14-INV-101. Development of Scientific Research (Fomento a la Investigación Científica) of the Paraguayan Program for the Development of Science and Technology (Proyecto Paraguayo para el Desarrollo de la Ciencia y Tecnología) - PROCENCIA. 2015-2017. Associate Researcher.
- Master's Degree in Electronic Engineering (14-POS-031). National Counsel of Science and Technology (Consejo Nacional de Ciencia y Tecnología, CONACYT). Paraguay. (2015-2017), Associate Researcher.
- Newton Picarte Project EPSRC: EP/N004043/1: New Configurations of Power Converters for Grid Interconnection Systems / CONICYT DPI20140007. (2014-2017), Responsible Researcher.
- Installation of Pilot Plant for the Use of Waste for the Generation of Energy and Drying of Firewood, Regional FIC Fund for Competitive Innovation (FIC Regional Fondo de Innovación para la Competitividad). (2014-2015), Co-researcher.
- Predictive Control Techniques of Power Converters for Renewable Energy Systems. Exchange Projects 2012, CONICYT and BMBF from Germany PCCI 12048. (2013-2014), Co-researcher.
- The use of Matrix Converters for Grid Interconnection Systems. Fondecyt Initiation into Research 2012-2015 11121492 Project. Project scored 4.720 points out of a maximum of 5, and stood at the first place among 48 projects. Responsible Researcher.
- Optimization of the Operation of an Indirect Matrix Converter for a Distorted Grid, Basal Subproject FB0821, Scientific-Technological Center of Valparaíso (Centro Científico-Tecnológico de Valparaíso, CCTVal). Program with basal financing, CONICYT Project, 2011 – 2012. Responsible Researcher.
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- Development and Implementation of Predictive Control Methods for and Indirect Matrix Converter, Scientific Initiation Incentive Program (Programa de Incentivo a la Iniciación Científica, PIIC), General Management of Research and Graduate Studies (Dirección General de Investigación y Postgrado, DGIP) UTFSM, 2009 – 2010. Responsible Researcher.
- Control of Indirect Matrix Converters, FONDECYT REGULAR 2008-2009, 1080059, Responsible Researcher: Prof. José Rodríguez, Co-Researchers: Dr. Pablo Correa and Prof. José Espinoza. PhD Thesis.
- Development of a Control Method for Matrix Converters, FONDECYT REGULAR 2006, 1060424. Responsible Researcher: Prof. José Rodríguez, Co-Researcher: Prof. José Espinoza. MSc Thesis.

Менторства

Кандидат Марко Ривера је навео да је ментор једне одбрањене докторске дисертације, и коментор једне одбрањене докторске дисертације:

1. Jazmín Ramirez. Rectificador Separable para Futuros Vehículos Inalámbricos. Doctorate in Communications and Electronics, Instituto Politécnico Nacional (IPN), Ciudad de México, México. (екстерни ментор).

2. Jorge Rodas. Application of on-line estimators of rotor variables for the improvement of the performance in multiphase speed variators. Doctorate in Electronic Engineering, Universidad Nacional de Asunción, Asunción, Paraguay (коментор)

Тренутно води још 5 кандидата, 4 на *Universidad de Talca, Curicó, Chile* и једног на *Information Technology and Communications, Tecnológico de Monterrey, Monterrey, NL, Mexico*.

Поред тога, успешно је извео или тренутно води 5 мастер радова и 25 завршних радова на основним академским студијама.

Мишљење комисије

Из изложеног се види да кандидат, др Марко Ривера, професор на Универзитету у Талки (*Universidad de Talca, Curicó, Chile*), испуњава услове Закона о високом образовању (члан 77) и Статута Електротехничког факултета Универзитета у Београду (чланови 17 и 118) за избор у звање гостујућег професора.

Др Марко Ривера има докторат наука, има 60 радова у међународним научним часописима, 226 радова на конференцијама, активно чланство у Управном одбоу IEEE PELS-а у ширем саставу (Јан. 2018 - Јан. 2021.), h-index: 26 (SCOPUS), 3437 цитата (SCOPUS) и гост уредник је у 5 специјалних издања врхунских међународних научних часописа. У периоду од 2013 године до данас, професор Марко Ривера активно сарађује са Електротехничким факултетом у Београду кроз предавања по позиву, увођење студената у научно-стручни и студијско-истраживачки рад и организацију заједничких специјалних секција на међународним конференцијама. Универзитет у Талки и Београдски Универзитет имају потписан билатерални споразум о академској сарадњи (20.03.2015. године - 20.03.2020. године).

Полазећи од анализе целокупне научно-истраживачке и наставне активности др Марка Ривере, обима и квалитета његовог научног, образовног и стручног рада, као и ангажовања да знање пренесе студентима и колегама у Србији, предлажемо Изборном већу Електротехничког факултета Универзитета у Београду, Већу групације техничко-технолошких наука и Сенату Универзитета у Београду, да проф. Марка Риверу изабере у звање гостујућег професора.

У Београду, 18.04.2019.године

Чланови Комисије

др Слободан Вукосавић, редовни професор
Универзитет у Београду - Електротехнички факултет

др Зоран Радаковић, редовни професор
Универзитет у Београду - Електротехнички факултет

др Предраг Пејовић, редовни професор
Универзитет у Београду - Електротехнички факултет