

Universitatea „Alexandru I. Cuza” Iași
 Facultatea de Informatică
 Concurs pentru ocuparea unui post de Conferențiar universitar, poz. 23
 Disciplinele postului: Mathematics; Matematică; Probabilități și statistică
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Candidat: CSII **Adrian Zălinescu**

FIȘA DE EVALUARE GENERALĂ A STANDARDELOR UNIVERSITĂȚII

CRITERII	DESCRIPTORI	FORMULA	PUNCTAJE ACORDATE
I. ACTIVITATEA DE CERCETARE (70%)	1. Articole științifice publicate in extenso în reviste cotate Web of Science cu factor de impact	$(60 \text{ puncte} \times \text{factor de impact} + 25) / \text{număr autori}$	397,43
	A. Zălinescu, <i>Second order Hamilton-Jacobi-Bellman inequalities</i> , C. R. Acad. Sci. Paris, Ser. I 335, 591-596, 2002	$60 \times 0,396 + 25$	48,76
	A. Zălinescu, <i>Weak Solutions and Optimal Control for Multivalued Stochastic Differential Equations</i> , Nonlinear Differential Equations and Applications, Vol. 15 (4-5), 511-533, 2008	$60 \times 0,873 + 25$	77,38
	L. Maticiuc, E. Pardoux, A. Rășcanu, A. Zălinescu, <i>Viscosity solutions for systems of parabolic variational inequalities</i> , Bernoulli 16, No. 1, 258-273, 2010	$(60 \times 1,07 + 25) / 4$	22,30
	A. Zălinescu, <i>Second order Hamilton-Jacobi-Bellman equations with an unbounded operator</i> , Nonlinear Analysis-Theory Methods & Applications, Vol. 75 (13), 4784-4797, 2012	$60 \times 1,192 + 25$	96,52
	K. Bahlali, L. Maticiuc, A. Zălinescu, <i>Penalization method for a nonlinear Neumann PDE via weak solutions of reflected SDEs</i> , Electronic Journal of Probability, 18, No. 102, 1-19, 2013	$(60 \times 0,904 + 25) / 3$	26,41
	A. Zălinescu, <i>Stochastic variational inequalities with jumps</i> , Stochastic Processes and their Applications, 124 (1), 785-811, 2014	$60 \times 1,024 + 25$	86,44
	B. Diomande, A. Zălinescu, <i>Maximum principle for an optimal control problem associated to a stochastic variational inequality with delay</i> , Electronic Journal of Probability, 20, No. 12, 1-35, 2015	$(60 \times 0,904 + 25) / 2$	39,62
	2. Articole științifice publicate in extenso în reviste indexate fără factor de impact	$20 \text{ puncte} / \text{număr autori}$	33,32
	S. Hamadene, E.P. Rotenstein, A. Zălinescu, <i>A generalized mixed zero-sum stochastic differential game and double barrier reflected BSDEs with quadratic growth coefficient</i> , Analele științifice ale Universității “Alexandru I. Cuza” din Iași, seria nouă Matematică, Tomul LV, f.2, 419-444, 2009	$20 / 3$	6,66
	A. Zălinescu, <i>Hamilton-Jacobi-Bellman equations associated to symmetric stable processes</i> , Analele științifice ale Universității	20	20

"Alexandru I. Cuza" din Iași, seria nouă Matematică, Tomul LVII, f.1, pp. 163-196, 2011		
L. Maticiuc, A. Rășcanu, A. Zălinescu, <i>Backward Stochastic Variational Inequalities with Locally Bounded Generators</i> , Analele științifice ale Universității "Alexandru I. Cuza" din Iași, seria nouă Matematică, Tomul LX, f.2, pp. 503-526, 2014	20/3	6,66
4. Articole științifice publicate in extenso în volumele conferințelor	indexate ISI: 30 puncte / număr autori	10
H.J. Engelbert, V. P. Kurenok, A. Zălinescu, <i>On Existence and Uniqueness of Reflecting Solutions of Stochastic Equations Driven by Symmetric Stable Processes</i> , 227-248, in <i>From Stochastic Calculus to Mathematical Finance. The Shiryaev Festschrift</i> (ed. Y. Kabanov, R. Lipster et J. Stoyanov), Springer, 2006	30/3	10
9. Contracte de cercetare științifică în instituții academice (universități, institute ale Academiei Române, institute naționale de cercetare, institute de cercetare din străinătate, alte categorii de institute academice)	contracte internaționale – membru: 100 puncte pentru fiecare 100.000 Euro / numărul membrilor echipei de cercetare contracte naționale – director: 50 puncte pentru fiecare 500.000 lei contracte naționale – membru: 50 puncte pentru fiecare 500.000 lei / numărul membrilor echipei de cercetare	136,37
Grant al Academiei Române: GAR 18/2007, <i>Probleme de control optimal pentru ecuații diferențiale stochastice cu operatori nemărginiți</i> , 2007 (coordonator: A. Zălinescu)	50*7.000/500.000	0,14
Proiect IDEI, nr. 395/2007, <i>Sisteme diferențiale cu perturbații aleatoare; probleme de control și viabilitate</i> , încheiat de Universitatea „Alexandru Ioan Cuza”, Iași, director proiect prof. dr. Aurel Rășcanu (5 membri)	50*803.011,28 / (5*500.000)	16,06
Contract Internațional tip Marie Curie Actions, Initial Training Networks, FP7-People-2007-1-1-ITN, no. 213841/2008, <i>Deterministic and Stochastic Controlled Systems and Applications</i> , încheiat de Universitatea „Alexandru Ioan Cuza”, Iași, director proiect prof. dr. Aurel Rășcanu (7 membri în echipă), http://www.math.uaic.ro/~ITN_Marie_Curie/	100*683.733,90/(7*100.000)	97,68
Proiect IDEI, nr. 241/2011, <i>Sisteme deterministe și stochastice cu restricții de stare</i> , încheiat de Universitatea „Alexandru Ioan Cuza”, Iași, director proiect prof. dr. Aurel Rășcanu (5 membri), http://www.math.uaic.ro/~idei/rascanu/	50*1.124.567,25/(5*500.000)	22,49
12. Citări și recenzii ale lucrărilor științifice	reviste de specialitate din străinătate: (10 + 20 x factor de impact) / număr autori, pentru fiecare citare monografii academice din străinătate: 50 puncte / număr autori, pentru fiecare citare	505,11
12.1. A. Zălinescu, <i>Second order Hamilton-Jacobi-Bellman inequalities</i> , C. R. Acad. Sci. Paris, Ser. I 335, 591-596, 2002, citat în <ul style="list-style-type: none"> D. Goreac, O.-S. Serea. Some Applications of Linear Programming Formulations in Stochastic Control. <i>J. Optim. Theory Appl.</i>, 155(2):572-593, 2012 T. Nie. A stochastic approach to a new type of parabolic 	10*2+20*(1,289+0,673)	59,24

	variational inequalities. <i>Stochastics</i> , 87(3):477–517, 2015.		
	<p>12.2. H.J. Engelbert, V. P. Kurenok, A. Zălinescu, <i>On Existence and Uniqueness of Reflecting Solutions of Stochastic Equations Driven by Symmetric Stable Processes</i>, 227–248, in <i>From Stochastic Calculus to Mathematical Finance. The Shiryaev Festschrift</i> (ed. Y. Kabanov, R. Lipster et J. Stoyanov), Springer, 2006, citat în</p> <ul style="list-style-type: none"> S. S. Sinel'nikov. On the joint distribution of $(\sup X - X, \sup X)$ for a Levy process X. <i>Russ. Math. Surv.</i>, 65(6):1189–1191, 2010. 	$(10+20*1,026)/3$	10,17
	<p>12.3. A. Zălinescu, <i>Weak Solutions and Optimal Control for Multivalued Stochastic Differential Equations</i>, Nonlinear Differential Equations and Applications, Vol. 15 (4-5), 511-533, 2008, citat în</p> <ul style="list-style-type: none"> H. Chi. Multivalued Stochastic McKean-Vlasov Equation. <i>Acta Math. Sci.</i>, 34(6):1731–1740, 2014. J. Wu. On existence of solutions of multivalued stochastic differential equations with discontinuous coefficients. <i>Stochastics</i>, 86(2):234–256, 2014. J. Wu. Well-posedness of Stratonovich multi-valued SDEs driven by semimartingales. <i>Stoch. Dyn.</i>, 14(4), 2014. B. Diomande, L. Maticiuc. Multivalued Stochastic Delay Differential Equations and Related Stochastic Control Problems. <i>Quaest. Math.</i>, 40(6):769–802, 2017. 	$10*4+20*(0,483+0,673+0,82+0,398)$	87,48
	<p>12.4. S. Hamadene, E.P. Rotenstein, A. Zălinescu, <i>A generalized mixed zero-sum stochastic differential game and double barrier reflected BSDEs with quadratic growth coefficient</i>, Analele științifice ale Universității "Alexandru I. Cuza" din Iași, seria nouă Matematică, Tomul LV, f.2, 419-444, 2009, citat în</p> <ul style="list-style-type: none"> R. Buckdahn, J. Li. Stochastic differential games with reflection and related obstacle problems for Isaacs equations. <i>Acta Math. Appl. Sin.-Engl. Ser.</i>, 27(4):647–678, 2011. Z. Yang, S. Tang. Dynkin Game of Stochastic Differential Equations with Random Coefficients and Associated Backward Stochastic Partial Differential Variational Inequality. <i>SIAM J. Control Optim.</i>, 51(1):64–95, 2013. E. Bayraktar, S. Yao. Doubly reflected BSDEs with integrable parameters and related Dynkin games. <i>Stoch. Process. Their Appl.</i>, 125(12):4489–4542, 2015. E. Bayraktar, S. Ya. On the Robust Dynkin Game. <i>Ann. Appl. Probab.</i>, 27(3):1702–1755, 2017. 	$(10*4+20*(0,242+1,45+1,024+1,506))/3$	41,48
	<p>12.5. L. Maticiuc, E. Pardoux, A. Rășcanu, A. Zălinescu, <i>Viscosity solutions for systems of parabolic variational inequalities</i>, Bernoulli 16, No. 1, 258-273, 2010, citat în</p> <ul style="list-style-type: none"> L. Maticiuc, A. Rascanu. A stochastic approach to a multivalued Dirichlet-Neumann problem. <i>Stoch. Process. Their Appl.</i>, 120(6):777–800, 2010. J. Ren, J. Wu. The optimal control problem associated with multi-valued stochastic differential equations with jumps. <i>Nonlinear Anal.-Theory Methods Appl.</i>, 86:30–51, 2013. E. Pardoux, A. Rascanu. <i>Stochastic Differential Equations, Backward SDEs, Partial Differential Equations</i>. In <i>Stochastic Differential Equations, Backward SDEs, Partial Differential</i> 	$(10*8+20*(3*1,024+1,192+3*0,673+0,956)+50)/4$	68,69

	<p>Equations, volume 69 of Stochastic Modelling and Applied Probability, pages 1–667. 2014</p> <ul style="list-style-type: none"> • A. M. Gassous, A. Rascanu, E. Rotenstein. Multivalued backward stochastic differential equations with oblique subgradients. <i>Stoch. Process. Their Appl.</i>, 125(8):3170–3195, 2015. • T. Klimsiak, A. Rozkosz, L. Slominski. Reflected BSDEs in time-dependent convex regions. <i>Stoch. Process. Their Appl.</i>, 125(2):571–596, 2015. • T. Nie. A stochastic approach to a new type of parabolic variational inequalities. <i>Stochastics</i>, 87(3):477–517, 2015. • N. TianYang. Forward-backward stochastic differential equation with subdifferential operator and associated variational inequality. <i>Sci. China-Math.</i>, 58(4):729–748, 2015. • C. Zhu, G. Yin, N. A. Baran. Feynman-Kac formulas for regime-switching jump diffusions and their applications. <i>Stochastics</i>, 87(6):1000–1032, 2015. • E. Pardoux, A. Rascanu. Continuity of the Feynman-Kac formula for a generalized parabolic equation. <i>Stochastics</i>, 89(5):726–752, 2017. 		
	<p>12.6. A. Zălinescu, <i>Second order Hamilton-Jacobi-Bellman equations with an unbounded operator</i>, Nonlinear Analysis-Theory Methods & Applications, Vol. 75 (13), 4784–4797, 2012, citat în</p> <ul style="list-style-type: none"> • J. Ren, J. Wu. The optimal control problem associated with multi-valued stochastic differential equations with jumps. <i>Nonlinear Anal.-Theory Methods Appl.</i>, 86:30–51, 2013. • J. Ren, J. Wu, H. Zhang. General Large Deviations and Functional Iterated Logarithm Law for Multivalued Stochastic Differential Equations. <i>J. Theor. Probab.</i>, 28(2):550–586, 2015. • Y. Guan, H. Zhang. Convergence of Invariant Measures for Multivalued Stochastic Differential Equations. <i>Acta Math. Sci.</i>, 36(2):487–498, 2016. • S. Xu, M. Zheng. A maximum principle for the stochastic variational inequalities. <i>Stat. Probab. Lett.</i>, 116:116–121, 2016. • B. Diomande, L. Maticiuc. Multivalued Stochastic Delay Differential Equations and Related Stochastic Control Problems. <i>Quaest. Math.</i>, 40(6):769–802, 2017. • Y. Ren, J. Wang, L. Hu. Multi-valued stochastic differential equations driven by GBrownian motion and related stochastic control problems. <i>Int. J. Control</i>, 90(5):1132–1154, 2017. 	$10*6+20*(1,192+0,854+0,483+0,54+0,398+2,208)$	173,5
	<p>12.7. K. Bahlali, L. Maticiuc, A. Zălinescu, <i>Penalization method for a nonlinear Neumann PDE via weak solutions of reflected SDEs</i>, Electronic Journal of Probability, 18, No. 102, 1-19, 2013, citat în</p> <ul style="list-style-type: none"> • L. Maticiuc, A. Rascanu. On the continuity of the probabilistic representation of a semilinear Neumann-Dirichlet problem. <i>Stoch. Process. Their Appl.</i>, 126(2):572–607, 2016. 	$(10+20*1,024)/3$	10,16
	<p>12.8. A. Zălinescu, <i>Stochastic variational inequalities with jumps</i>,</p>	$10+20*0,82$	26,4

Stochastic Processes and their Applications, 124 (1), 785-811, 2014, citat în		
<ul style="list-style-type: none"> L. Maticiuc, A. Rascanu, L. Slominski. Multivalued monotone stochastic differential equations with jumps. <i>Stoch. Dyn.</i>, 17(3), 2017. 		
12.9. L. Maticiuc, A. Rășcanu, A. Zălinescu, <i>Backward Stochastic Variational Inequalities with Locally Bounded Generators</i> , Analele științifice ale Universității “Alexandru I. Cuza” din Iași, seria nouă Matematică, Tomul LX, f.2, pp. 503-526, 2014, citat în <ul style="list-style-type: none"> L. Maticiuc, A. Rascanu. Backward stochastic variational inequalities on random interval. <i>Bernoulli</i>, 21(2):1166–1199, 2015. T. Nie. A stochastic approach to a new type of parabolic variational inequalities. <i>Stochastics</i>, 87(3):477–517, 2015. N. TianYang. Forward-backward stochastic differential equation with subdifferential operator and associated variational inequality. <i>Sci. China-Math.</i>, 58(4):729–748, 2015. 	$(10 \cdot 3 + 20 \cdot (1.07 + 0.673 + 0.956)) / 3$	27,99
13. Lucrări susținute în calitate de invitat la manifestări științifice (conferințe, congrese, simpozioane, seminarii și ateliere de lucru)	străinătate: 25 puncte pentru fiecare activitate țară: 10 puncte pentru fiecare activitate	330
Workshop Mesures de Young et Controle Stochastique, <i>Inéquations de Hamilton–Jacobi–Bellman de deuxième ordre</i> , Brest, France, Decembrie 2002		25
Workshop Evolution Equations for Deterministic and Stochastic Systems, <i>Stochastic differential equations driven by stable processes</i> Delft, Netherlands, Iunie 2004		25
Workshop Evolution Equations for Deterministic and Stochastic Systems, <i>Hamilton–Jacobi–Bellman equations associated to SDEs driven by symmetric stable processes</i> , Pisa, Italy, Mai 2005		25
Conferință ICAADE, <i>Integro-differential HJB equations associated to SDEs driven by stable processes</i> , Iași, Septembrie 2006		10
Workshop Mathematical approaches in optimization, modellisation and control, <i>A Maximum Principle for Controlled Stochastic Variational Inequalities</i> , Iași, Aprilie 2008		10
Workshop on Stochastic Partial Differential Equations, <i>Backward stochastic variational inequalities with quadratic growth</i> , Iasi, Septembrie 2008		10
Zilele Universitatii “Al. I. Cuza”, Iasi, <i>A generalized mixed zero-sum stochastic differential game and double barrier reflected BSDEs with quadratic growth coefficient</i> , October 2008		10
Worskshop on Finance and Insurance, Institut fur Stochastik, <i>Variational inequalities driven by Levy processes</i> , Jena, Germania, Martie 2009		25
Conference on Stochastic Differential Equations, Stochastic Partial Differential Equations and Related Topics, <i>Viscosity solutions for systems of parabolic variational inequalities</i> , Manchester, Marea Britanie, August 2009		25
10ème Colloque Franco-Roumain de Mathématiques Appliquées, <i>Stochastic Variational Inequalities With Jumps</i> , Poitiers, Franța, August 2010		25
Conference on Stochastic Control Problems for FBSDEs and		25

	Applications, <i>Optimal control problems for SDEs with oblique reflection</i> , Marrakech, Maroc, Decembrie 2010		
	Zilele Academice Iesene, <i>EDS cu restrictii de stare: probleme de control</i> , Academia Romana, filiala Iasi, Septembrie 2011		10
	Workshop on Stochastic Analysis and Applications, <i>A penalization method for the weak solution of reflected SDEs</i> , El Kelaa Mgouna, Maroc, Aprilie 2012		25
	6th International Conference on Stochastic Analysis and Its Applications, <i>Stochastic variational inequalities driven by Poisson random measures</i> , Bedlewo, Polonia, Septembrie 2012		25
	12ème Colloque Franco-Roumain de Mathématiques Appliquées, <i>A probabilistic approach for functional parabolic PDEs using BSDEs with time-delayed generators</i> , Lyon, Franța, August 2014		25
	International Conference on Applied and Pure Mathematics, <i>A boundary control problem for a stochastic PDE with nonlinear dynamical boundary conditions</i> , Iasi, Noiembrie 2015		10
	13ème Colloque Franco-Roumain de Mathématiques Appliquées, <i>Jump diffusions with oblique subgradients</i> , Iasi, August 2016		10
	International Conference on Applied and Pure Mathematics, <i>BSDEs with time-delayed generators in the study of path-dependent nonlinear Kolmogorov equations</i> , Iasi, Noiembrie 2017.		10
	14. Profesor/cercetător invitat la universități/institute de cercetare	străinătate: 25 puncte pentru fiecare activitate	50
	Visiting Professor, Department of Computer Science, University of Verona, Mai 2016		25
	Visiting Professor, Department of Computer Science, University of Verona, Martie 2017		25
	19. Participări la manifestări științifice	internaționale: membru comitet organizare/consiliu științific, 15 puncte pentru fiecare activitate;	45
	Membru în cadrul comitetului de organizare al conferinței cu participare internațională <i>Workshop on Stochastic Partial Differential Equations</i> , 8–9 Septembrie 2008, Universitatea “Alexandru Ioan Cuza”, Iași, România		15
	Membru în cadrul comitetului de organizare al <i>Research School on Controllability of Deterministic and Stochastic Systems and its Applications</i> , 18–30 Iunie 2012, Universitatea “Alexandru Ioan Cuza”, Iași, România		15
	Membru în cadrul comitetului de organizare al <i>International Conference on “Controlled deterministic and stochastic systems”</i> , 2-7 Iulie 2012, Universitatea “Alexandru Ioan Cuza”, Iași, România		15
II. ACTIVITATEA DIDACTICĂ (30%)	3. Materiale suport curs, seminar, lucrări practice și programe analitice detaliate	10 puncte pentru fiecare activitate	40
	Suport de curs <i>Backward Stochastic Differential Equations and Applications to Mathematical Finance</i> pentru cursul susținut studenților de la Master ca Visiting Professor la Department of Informatics, University of Verona, Mai 2016		10
	Suport de curs <i>Introduction to Stochastic Partial Differential Equations</i> pentru cursul susținut studenților de la Master ca Visiting Professor la Department of Informatics,		10

	University of Verona, Martie 2017		
	Suport de curs <i>Mathematics</i> pentru cursul susținut susținut studenților de anul I la Facultatea de Informatică a Universității “Al. I. Cuza” Iași, Octombrie 2017-Ianuarie 2018		10
	Suport de seminar pentru seminarul asociat cursului de mai sus		10

Punctaj total: $0,70 \cdot 1547,23 + 0,30 \cdot 40 = 1095.06$ puncte

Data,
29.12.2017

Semnătura,