

ALLEGATO B

UNIVERSITÀ DEGLI STUDI DI MILANO

selezione pubblica per n. __2__ posto/i di Ricercatore a tempo determinato ai sensi dell'art.24, comma 3, lettera a) della Legge 240/2010 nell'ambito del Piano Nazionale di Ripresa e Resilienza (PNRR), per il settore concorsuale 01/B1 - Informatica, settore scientifico-disciplinare INF/01 - Informatica presso il Dipartimento di INFORMATICA "GIOVANNI DEGLI ANTONI"
(avviso bando pubblicato sulla G.U. n. 81 del 11/10/2022) Codice concorso 5113

[Roberto Pagliarini] CURRICULUM VITAE

(N.B. IL CURRICULUM NON DEVE ECCEDERE LE 30 PAGINE E DEVE CONTENERE GLI ELEMENTI CHE IL CANDIDATO RITIENE UTILI AI FINI DELLA VALUTAZIONE.

LE VOCI INSERITE NEL FACSIMILE SONO A TITOLO PURAMENTE ESEMPLIFICATIVO E POSSONO ESSERE SOSTITUITE, MODIFICATE O INTEGRATE)

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	PAGLIARINI
NOME	ROBERTO
DATA DI NASCITA	23/07/1981

TITOLI

TITOLO DI STUDIO

(indicare la Laurea conseguita inserendo titolo, Ateneo, data di conseguimento, ecc.)

18/07/2007 - Laurea Magistrale in Informatica

Università degli Studi di Verona

Facoltà di Scienze Matematiche, Fisiche e Naturali

Titolo tesi: Esperimenti computazionali per la determinazione dei parametri regolativi nei P sistemi metabolici

TITOLO DI DOTTORE DI RICERCA O EQUIVALENTI, OVVERO, PER I SETTORI INTERESSATI, DEL DIPLOMA DI SPECIALIZZAZIONE MEDICA O EQUIVALENTE, CONSEGUITO IN ITALIA O ALL'ESTERO

(inserire titolo, ente, data di conseguimento, ecc.)

27th of April, 2011

University of Verona, Verona, Italy

Faculty of Mathematical, Physical, and Natural Science

Research Doctorate (PhD), "Doctor Europaeus"

Graduate School of Science, Engineering and Medicine

PhD program in Computer Science

Natural Computing, Membrane Computing, Systems Biology, Bioinformatics

Thesis title: Modelling and Reverse-Engineering of Biological Phenomena by means of Metabolic P Systems

CONTRATTI DI RICERCA, ASSEGNI DI RICERCA O EQUIVALENTI

(per ciascun contratto stipulato, inserire università/ente, data di inizio e fine, ecc.)

*July 2016 - present

IRCCS Ospedale San Raffaele

Molecular basis of Polycystic Kidney Disease Unit, Genetics and Cell Biology Division

Center for Omics Science

Senior Postdoctoral Fellow

*June 2011 - June 2016

TeleThon Institute of Genetics and Medicine (TIGEM)

Postdoctoral Fellow

*January 2011 - May 2011

University of Verona

Faculty of Mathematical, Physical, and Natural Science

Postdoctoral Fellow

*July 2009 - March 2010

Cranfield University, Cranfield, U. K.

School of Health

Visiting Scientist

ATTIVITÀ DIDATTICA A LIVELLO UNIVERSITARIO IN ITALIA O ALL'ESTERO

(inserire anno accademico, ateneo, corso laurea, numero ore, ecc.)

* Academic years 2016/2017, 2018/2019, 2019/2020, 2020/2021, 2021/2022

Vita-Salute San Raffaele University

Teaching assistant for the activities of the course "Molecular Biology", Master Degree in Medicine and Surgery

* Academic year 2010/2011

University of Verona

Faculty of Mathematical, Physical, and Natural Science Public University

Teaching assistant for the laboratory activities of the course “Computer Science”, Degree in Biotechnology

* Academic year 2010/2011

University of Verona

Faculty of Mathematical, Physical, and Natural Science Public University

Teaching assistant for the activities of the course “Numerical Calculus”, Degree in Applied Mathematics

* Academic year 2008/2009

University of Verona

Faculty of Mathematical, Physical, and Natural Science Public University

Teaching assistant for the activities of the course “Probability and Statistics”, Degree in Applied Mathematics

* Academic year 2008/2009

University of Verona

Faculty of Mathematical, Physical, and Natural Science Public University

Teaching assistant for the activities of the course “Introduction to Computing”, Degree in Biotechnology

ATTIVITÀ DI RELATORE A CONGRESSI E CONVEGNI NAZIONALI E INTERNAZIONALI

(inserire titolo congresso/convegno, data, ecc.)

Invited Talks

- “Reverse engineering and modelling of metabolic networks: the case of Mendelian disorders”- 13th May 2014, BioPreDyn: The systems biology modeling cycle - building mechanistic dynamical models, EMBL-EBI, Hinxton, Cambridge, U. K., 12-15th May 2014.
- “Computational Modelling of Inborn Errors of Liver Metabolism” - 19th June 2013, National Research Council (CNR), Naples, Italy.
- “Systems biology of genetic diseases/integration of gene networks and metabolic networks” - 14th June 2013, BioPreDyn Workshop, Centre de Regulacio Genomica (CRG), Barcelona, Spain, 11-15th June 2013.
- “Developing a mathematical modeling framework for linking signaling, regulation, and metabolism: metabolic processes under the influence of hormones and genetic disorders as case studies” - 5th March 2013, 1st BioPreDyn Annual Meeting, Naples, Italy, 4-6th March 2013.

Talks

- In silico simulations predict a causative link between increased glycolysis and metabolic reprogramming in autosomal dominant polycystic kidney disease. 16th IEEE International Conference on Computational Intelligence in Bioinformatics and Computational Biology. Certosa di Pontignano, Italy, July 9-11, 2019.

- A Computational Systems-Level Approach to Decipher Inborn Errors of Metabolism. 13th Annual Meeting of the Bioinformatics Italian Society. University of Salerno, Italy, 15-17 June 2016.
- “Differential Flux-balance Analysis: a new computational approach to identify alterations in human metabolic disorders” - 25th February 2015, BioPreDyn Annual Meeting 2015, Barcelona, Spain, 24 - 25th February 2015.
- “An analysis of correlative and quantitative causality in P systems” - 29th August 2013, CMC13 - The 13th International Conference on Membrane Computing, Budapest, Hungary, 28-31th August 2012.
- “A genome-scale modelling approach to study inborn errors of liver metabolism: towards an in-silico patient” - 15th November 2012, Fifth Annual RECOMB/ISCB Conference on Regulatory and Systems Genomics, with DREAM Challenges. San Francisco, USA, 12-15th November 2012.
- “Metabolic P Systems practical” - 9th February 2010, Cranfield University, Cranfield, U. K.
- “Metabolic P Systems: an overview” - 9th February 2010, Cranfield University, Cranfield, U. K.
- “MP analysis of the stochastic Schlogel’s reaction” - 4th February 2010, Eight Brainstorming Week on Membrane Computing, Sevilla, Spain 1-5th February 2010.
- “MetaPlab, a virtual laboratory for Metabolic P systems: use examples and main structures” - 24th August 2009. Tenth Workshop on Membrane Computing, Curtea de Arges, Romania, 24-27th August 2009.
- “Modelling and inferring biological phenomena by using Metabolic P Systems” - 24th April 2009. University of Verona, Department of Computer Science, Verona, Italy.
- “Multi-agent systems simulating the physiological role of plasmic membrane” - 22nd April 2009. University of Verona, Department of Computer Science, Verona, Italy.
- “Log-Gain theory for Metabolic P systems: work in progress” - 19th March 2009. University of Verona, Department of Computer Science, Verona, Italy.
- “Inferring the initial fluxes of a metabolic process” - 3rd February 2009, Seventh Brainstorming Week on membrane Computing, Sevilla, Spain 2-6th February 2009.
- “Towards an MP model of non-photochemical quencing” - 20th July 2008. Ninth Workshop on Membrane Computing, Edinburgh, U.K., 29 - 31th July 2008.
- “Quantum P Systems: Background, Definition and Computational Power” - 17th September 2008. University of Verona, Department of Computer Science, Verona, Italy.
- “Reverse-engineering of gene networks” - 11th September 2008. University of Verona, Department of Computer Science, Verona, Italy.

CONSEGUIMENTO DI PREMI E RICONOSCIMENTI NAZIONALI E INTERNAZIONALI PER ATTIVITÀ DI RICERCA
(inserire premio, data, ente organizzatore, ecc.)

- 2017 “Post-Doctoral Fellowship-year 2018” award from Fondazione Umberto Veronesi for the year 2018.
- 2017 “Bando ricerca finalizzata anno 2016 - Giovani Ricercatori (co-PI)” award from Italian Ministry of Health for the years 2018-2020.

Partecipazione a Congressi

(indicare diploma, data di conseguimento, ecc.)

Symbol * denotes personal presentation of a work in the conference.

- 16th IEEE International Conference on Computational Intelligence in Bioinformatics and Computational Biology *. Certosa di Pontignano, Italy, 9-11 July, 2019.
- 13th Annual Meeting of the Bioinformatics Italian Society *. University of Salerno, Italy, 15-17 June 2016.
- Sixth Annual RECOMB/ISCB Conference on Regulatory and Systems Genomics *, with DREAM Challenges. Toronto, Canada, 8-
- BioPreDyn Workshop *, Centre de Regulacio Genomica (CRG), Barcelona, Spain, 11-15th June 2013.
- 4th International Workshop on Interactions between Computer Science and Biology *. Florence, Italy, 6th June 2013.
- 1st BioPreDyn Annual Meeting *, Naples, Italy, 4-6th March 2013.
- Fifth Annual RECOMB/ISCB Conference on Regulatory and Systems Genomics *, with DREAM Challenges. San Francisco, USA, 12-15th November, 2012.
 - The 13th International Conference on Membrane Computing *, Budapest, Hungary, 28-31th August 2012.
- 12th International Conference on Systems Biology *, Mannheim, Germany, 28th August - 1st September 2011.
- XII International Congress on Molecular Systems Biology *, Lleida, Spain, 8-12th May 2011,
- Eight Brainstorming Week on Membrane Computing *, Sevilla, Spain, 1-5th February 2010.
- Tenth Workshop on Membrane Computing *, Curtea de Arges, Romania, 24-27th August 2009.
- Seventh Brainstorming Week on Membrane Computing *, Sevilla, Spain, 2-6th February 2009.
- The Architecture of Biological Complexity - Biocomplex 2008, Trento, Italy, 4-6th November 2008.
- Ninth Workshop on Membrane Computing *, Edinburgh, U.K., 29-31th July 2008.

PRODUZIONE SCIENTIFICA

PUBBLICAZIONI SCIENTIFICHE

(per ciascuna pubblicazione indicare: nomi degli autori, titolo completo, casa editrice, data e luogo di pubblicazione, codice ISBN, ISSN, DOI o altro equivalente)

Peer-reviewed Journal Papers

[1] R. Pagliarini, C. Podrini. Metabolic Reprogramming and Reconstruction: Integration of Experimental and Computational Studies to Set the Path Forward in ADPKD. *Frontiers in Medicine*, 8:740087, 2021.

ISSN: 2296-858X (Electronic)

2296-858X (Linking)

DOI: 10.3389/fmed.2021.740087

[2] Podrini C.*, Rowe I.*, Pagliarini R.*, Costa A. S. H., Chiaravalli M., Di Meo I., Kim H., Distefano G., Tiranti V., Qian F., di Bernardo D., Frezza C., Boletta A. Dissection of Metabolic Reprogramming in Polycystic Kidney Disease Reveals a Complex and Coordinated Rewiring of Bioenergetic Pathways. *Communications Biology*, 1:194, 2018.

ISSN: 2399-3642 (Electronic)

2399-3642 (Linking)

DOI: doi.org/10.1038/s42003-018-0200-x

[3] L. Drusian, E.A. Nigro, V. Mannella., R. Pagliarini, M. Pema, A.S.H. Costa, F. Benigni.,A. Larcher, M. Chiaravalli, E. Gaude , F. Montorsi, U. Capitanio, G. Musco, C. Frezza, A. Boletta. mTORC1 Upregulation Leads to Accumulation of the Oncometabolite Fumarate in a Mouse Model of Renal Cell Carcinoma. *Cell Reports*, 24 (5), pp. 1093-1104, 2018.

ISSN: 2211-1247 (Electronic)

DOI: 10.1016/j.celrep.2018.06.106

[4] R. Pagliarini, R. Castello, F. Napolitano, R. Borzone, P. Annunziata, G. Mandrile, M. De Marchi, N. Brunetti -Pierri, D. di Bernardo. In silico modelling of liver metabolism in a human disease reveals a key enzyme for histidine and histamine homeostasis . *Cell Reports*, 15, 2292-2300, 2016.

ISSN: 2211-1247 (Electronic)

DOI: 10.1016/j.celrep.2016.05.014

[5] R. Pagliarini, R. Castello, R. Borzone, P. Annunziata, G. Mandrile, M. De Marchi, N. Brunetti -Pierri, D. di Bernardo. In-silico modelling of Primary Hyperoxaluria Type 1, a human inborn error of liver metabolism, unravels a key enzyme for histamine homeostasis. *Inflammation Research*, Volume 64, Supplement 1, 2015.

ISSN: 1420-908X (Electronic)

1023-3830 (Print)

[6] R. Pagliarini, M. Sangiovanni, A. Peron, D. di Bernardo. Combining Flux Balance Analysis and Model Checking for Metabolic Network Validation and Analysis. *Natural Computing*, Natural Computing. Vol. 14, Issue 3, pp. 341 -354, 2015.

ISSN: 1572-9796 (Electronic)

1567-7818 (Print)

DOI: https://doi.org/10.1007/s11047-014-9419-8

[7] V. Manca, A. Castellini, G. Franco, L. Marchetti, R. Pagliarini. Metabolic P Systems: A Discrete Model for Biological Dynamics. *Chinese Journal of Electronics*, Vol.22, No.4, 2013.

ISSN: 1022-4653

[8] R. Pagliarini, D. di Bernardo. A genome-scale modeling approach to study inborn errors of liver metabolism: toward an in silico patient . *Journal of Computational Biology*, 20(5), 2013.

ISSN: 1066-5277 (Print)

1557-8666 (Electronic)

1066-5277 (Linking)

DOI: 10.1089/cmb.2012.0276

[9] R. Pagliarini, O. Agrigoroaiei, G. Ciobanu, V. Manca. An Analysis of Correlative and Static Causality in P Systems. *Lecture Notes in Computer Science*, Volume 7762, pp 323-341, 2013.

ISSN: 1611-3349 (Electronic)

0302-9743 (Print)

DOI: 10.1007/978-3-642-36751-9_22

[10] V. Manca, L. Marchetti, R. Pagliarini. MP Modelling of Glucose-Insulin Interactions in the Intravenous Glucose Tolerance Test. *International Journal of Natural Computing Research*, vol. 3, Issue 2 , 2011 , pp. 13 -24

ISBN13: 9781466642539|ISBN10: 146664253X|EISBN13: 9781466642546

DOI: 10.4018/978-1-4666-4253-9.ch011

[11] G. Franco, V. Manca, R. Pagliarini. Regulation and Covering Problems in MP Systems. *Lecture Notes in Computer Science*, Volume 5957, pp. 242-251, 2010.

Print ISBN 978-3-642-11466-3
Online ISBN 978-3-642-11467-0
DOI: 10.1007/978-3-642-11467-0_18

[12] A. Castellini, G. Franco and R. Pagliarini. Data analysis pipeline from laboratory to MP models. *Natural Computing*. Vol. 10, Issue 1, pp. 55-76, 2011.

ISSN: 1572-9796 (Electronic)
1567-7818 (Print)

DOI: <https://doi.org/10.1007/s11047-010-9200-6>

[13] R. Pagliarini, G. Franco, V. Manca. An algorithm for initial fluxes of MP systems. *International Journal of Computers, Communications & Control*. Vol. IV, No. 3, pp. 263-272, 2009.

Online ISSN 1841-9844, ISSN-L 1841-9836

DOI: 10.15837/ijccc.2009.3.2434

[14] V. Manca, R. Pagliarini, S. Zorzan. A photosynthetic process modelled by a metabolic P system. *Natural Computing*, Vol. 8, pp. 847-864, 2009.

ISSN: 1572-9796 (Electronic)
1567-7818 (Print)

DOI: <https://doi.org/10.1007/s11047-008-9104-x>

[15] V. Manca, R. Pagliarini, S. Zorzan. Toward an MP model of Non Photochemical Quenching. *Lecture Notes in Computer Science*, volume 5391, pp. 299-310, 2009.

ISSN: 1611-3349 (Electronic)
0302-9743 (Print)

DOI: 10.1007/978-3-540-95885-7_22

Refereed Conferences with Proceedings

[16] R. Pagliarini, A. Boletta. In SILICO Simulations Predict a Causative Link between Increased Glycolysis and Metabolic Reprogramming in Autosomal Dominant Polycystic Kidney Disease. In 16th IEEE Conference on Computational Intelligence in Bioinformatics and Computational Biology, CIBCB 2019.

DOI: 10.1109/CIBCB.2019.8791243

[17] R. Pagliarini, L. Bianco, V. Manca, C. Bessant. Linking bistable dynamics to Metabolic P Systems. In *Proceedings of the Eighth Brainstorming Week on Membrane Computing*. Seville, Spain, February 2010.

ISBN: 978-84-614-2357-6

[18] L. Bianco, R. Pagliarini, C. Bessant. Towards a GPU-aided simulation of nuclear receptors modulation. *International Workshop on High Performance Computational Systems Biology*, October 2009.

ISBN; 9781424449743

[19] R. Pagliarini, V. Manca. The discovery of initial fluxes of Metabolic P Systems. In *Proceedings of the Seventh Brainstorming Week on Membrane Computing*. Seville, Spain, February 2009.

ISBN: 978-84-613-2836-9

Book Chapters

[20] G. Gambardella*, R. Pagliarini*, F. Gregoretti, G. Oliva, D. di Bernardo. Differential Equation Based Reverse-Engineering Algorithms: Pros and Cons. *Gene Network Inference*, Springer-Verlag Berlin Heidelberg, 2014.

Print ISBN: 978-3-642-45160-7

Online ISBN: 978-3-642-45161-4

DOI: https://doi.org/10.1007/978-3-642-45161-4_4

[21] L. Marchetti, V. Manca, R. Pagliarini, A. Bolling-Fischer. MP Modelling for Systems Biology: two case studies. *Applications of membrane computing in systems and synthetic biology. Applications of*

Membrane Computing in Systems and Synthetic Biology, volume 7 of Emergence, Complexity and Computation, pages 223 -245. Springer International Publishing, 2014.
ISSN: 2194-7295 (Electronic)
2194-7287 (Print)
DOI: 10.1007/978-3-319-03191-0_7

ATTIVITÀ DI REFEREE

- STAR Protocols, by Cell Press
- Review Editor of Optimization
- International Journal of Computers, Communications & Control
- IEEE International Conference on Bioinformatics & Biomedicine (BIBM)
- Gecco
- PPNS
- ECCB 2012
- ECCB 2016

Data

24/10/2022

Luogo

Milano