

Ilaria Stura – M.Sc.

Birth date: 31/01/1987

Nationality: Italian

Position held

- June 2018 – October 2020 Research fellow at Dept of Public Health and Paediatric Sciences, Italy, advisor Prof. Giuseppe Migliaretti. Research project on Epidemiology and Statistics applied to Medicine
- June 2017 – May 2018 Research fellow at San Luigi Hospital, Orbassano (TO) Italy, advisor Prof. Giuseppe Migliaretti. Research project on Epidemiology and Statistics applied to Medicine
- February – April 2017 Research fellow at Neuroscience Department, advisor Prof. C. Guiot
- January 2014 – March 2017 Ph.D. student of Complex System for Life Science, University of Torino. Thesis: *Predicting prostate cancer recurrence: mathematical models based on PSA monitoring and pathological findings*, advisor Prof. C. Guiot.
- October 2011 – December 2013 Business Intelligence Junior Consultant at System Evolution s.r.l.

Teaching experience

- 2018 – present Tutoring (collaboratore alla didattica) in the bachelor course *Statistica* (Statistics) in Tecniche di Radiologia Medica, per Immagini e Radiologia – Università degli Studi di Torino – Cuneo
- 2018 – present Tutoring (collaboratore alla didattica) in the bachelor course *Statistica* (Statistics) in Scienze Infermieristiche – Università degli Studi di Torino – Cuneo
- 2019 Guest lecturer (docente a contratto) in bachelor course *Statistica* (Statistics) in Igiene Dentale – Dental School (Torino)
- 2016 – 2019 Tutoring (collaboratore alla didattica) in the bachelor course *Statistica* (Statistics) for Corso di Laurea in Scienze Infermieristiche (Nurses) – Università degli Studi di Torino – Beinasco
- 2015 – 2018 Tutoring (collaboratore alla didattica) in the bachelor course *Fisica Applicata* for Corso di Laurea in Scienze Infermieristiche (Nurses) – Università degli Studi di Torino – Torino

Education

- 15th March 2017 PhD in Complex Systems for Life Sciences – University of Torino
- 18th July 2011 Master Degree in Mathematics – University of Torino (Probabilistic Models course)

Research interests

Biomathematics, mathematical models applied on medicine and biology, epidemiology, databases.

Scientific collaborations

Prof. F. Dong, Dr X. Zhang (University of Bedfordshire, UK), Prof. G. Stamatakos (ICCS, Greece), Prof. R. Radakhrisnan (University of Pennsylvania), Dr. S. Ansari, Prof. R. Cavalli, Prof. C. Guiot, Dr. E. Ficiara, Prof. G. Migliaretti, Prof. E. Venturino, Prof. E. Vesce (University of Torino, Italy), Dr. E. Perracchione (University of Padova, Italy), Dr P. Ciaramitaro, Dr. G. Isoardo (CTO, Torino, Italy), Dr. Brizzi, Dr. Fiori, Dr S. Novello, Prof. Porgiglia, Dr. LM Ricciardolo (San Luigi Hospital, Orbassano (TO), Italy), Dr De Sanctis, Dr. Matarazzo (Regina Margherita Hospital, Torino, Italy), Dr. Monietti (Molinetto Hospital, Torino, Italy).

Participation in research groups

2017 – present	Member of the Italian Society of Medical Statistics and Clinical Epidemiology (SISMEC)
2015 – present	Member of the National Group for Scientific Computing (GNCS-INdAM)
2015 – present	Member of the Society of Mathematical Biology (SMB)
2014 – present	Member of Virtual Physiological Human (VPH)

Member of organizing committees

February 2017	Congress 'Visione multidisciplinare del carcinoma della prostata' (Multidisciplinary vision of the prostate tumor) in Candiolo, Italy
October 2016	Workshop <i>Il Nettare della Matematica</i> (dissemination of biomathematics to High School students) in Torino, Italy
September 2015	International Workshop <i>CAMo: from molecules to modelling</i> , Torino.
March 2015	CHIC meeting in Torino (4 th Progress Meeting)

Reviewer for

- Oncotarget
- Lung Cancer

Awards, prizes and grants

March 2018	SISMEC Award "Bando Giovani Ricercatori" (Young Researchers Award)
February 2017 – April 2017	Scholarship sponsored by CHIC European Project (Grant Agreement n° 600841)
February 2014 – January 2017	Three years scholarship sponsored by CHIC European Project (Grant Agreement n° 600841)

Funding and participation in research projects

October 2016	Sponsorship by Fondo Fondazione Ricerca e Talenti, Fondazione CRT, Torino, to organize the Workshop <i>Il nettare della matematica</i> .
February 2014 – January 2017	Participation to the European Project Computational Horizon In Cancer (CHIC), Grant agreement n° 600841.

Research period abroad and visits

8 – 22 June 2016	Visiting period at University of Bedfordshire (Prof. Feng Dong) to implement an App for mobile phone for prostatectomized patients.
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Personal skills

Technical skills	Excellent knowledge of: Microsoft Office Tools, SAS, MATLAB Good knowledge of: Dataflux, Django, PostGreSQL Base knowledge of: R, Blender, Unity3D, Maple, BlockSim
Programming languages	SQL (excellent), C++, Python (basic), Visual Basic (basic)
Languages	Italian (mother tongue), English (B2: FIRST Certificate), French (school level)
Personal skill	Good communication and organizational skills gained through the participation in various University team projects and workshops/conferences.

Publications

In journal

Stura, I., Gentile, T., Migliaretti, G., Vesce, E., *Accreditation in higher education: Does disciplinary matter?*, 2019, *Studies in Educational Evaluation*, 63, pp. 41-47

Porpiglia F, Amparore D, Checcucci E, Manfredi M, Stura I, Migliaretti G, Autorino R, Ficarra V, Fiori C., *Three-dimensional virtual imaging of renal tumours: a new tool to improve the accuracy of nephrometry scores*. *BJU Int*. 2019 Aug 7. doi: 10.1111/bju.14894. PMID: 31390140

Migliaretti G, Ame C, Ciullo S, Fontana E, Stura I, Nano E, Laino F, Isoardo G., *Metabolic and psychological effects of short-term increased consumption of less-processed foods in daily diets: A Pilot Study*. *Diabetes Metab*. 2019 Jul 17. pii: S1262-3636(19)30097-7. doi: 10.1016/j.diabet.2019.07.002. PMID: 31325499

Capelletto, E., Migliorino, M.R., Morabito, A., (...), Migliaretti, G., Novello, S., *Final results of the SENECA (SEcond line NintEdanib in non-small cell lung CAncer) trial*, *Lung Cancer*, 2019

Ilaria Stura, Tiziana Gentile, Giuseppe Migliaretti, Enrica Vesce, *Accreditation in higher education: Does disciplinary matter?*, *Studies in Educational Evaluation*, Volume 63, 2019, Pages 41-47, ISSN 0191-491X, doi <https://doi.org/10.1016/j.stueduc.2019.07.004>

Porpiglia, F., Manfredi, M., Checcucci, E., (...), Migliaretti, G., Fiori, C., *Use of chitosan membranes after nerve-sparing radical prostatectomy improves early recovery of sexual potency: results of a comparative study*, *BJU International*, 2019

Migliaretti, G., Ame, C., Ciullo, S., (...), Laino, F., Isoardo, G., *Metabolic and psychological effects of short-term increased consumption of less-processed foods in daily diets: A Pilot Study*, *Diabetes and Metabolism*, 2019

Manfredi M, Checcucci E, Fiori C, Garrou D, Aimar R, Amparore D, De Luca S, Bombaci S, Stura I, Migliaretti G, Porpiglia F, *Total anatomical reconstruction during robot-assisted radical prostatectomy: focus on urinary continence recovery and related complications after 1000 procedures*. *BJU Int*. 2019 Feb 23. doi: 10.1111/bju.14716. [Epub ahead of print]

Bessone F, Argenziano M, Grillo G, Ferrara B, Pizzimenti S, Barrera G, Cravotto G, Guiot C, Stura I, Cavalli R, Dianzani C. *Low-dose curcuminoid-loaded in dextran nanobubbles can prevent metastatic spreading in prostate cancer cells*, *Nanotechnology*. 2019 May 24;30(21):214004. doi: 10.1088/1361-6528/aaff96. Epub 2019 Jan 17.

Ansari SAMK, Ficiarà E, Ruffinatti FA, Stura I, Argenziano M, Abollino O, Cavalli R, Guiot C, D'Agata F, *Magnetic Iron Oxide Nanoparticles: Synthesis, Characterization and Functionalization for Biomedical Applications in the Central Nervous System*, *Materials (Basel)*. 2019 Feb 2;12(3). pii: E465. doi: 10.3390/ma12030465.

Porpiglia F, Manfredi M, Checcucci E, Garrou D, De Cillis S, Amparore D, De Luca S, Fregnan F, Stura I, Migliaretti G, Fiori C. (Oct 2018) *Use of chitosan membranes after nerve-sparing radical prostatectomy improves early recovery of sexual potency: results of a comparative study*. *BJU Int*. doi: 10.1111/bju.14583

Zullino S, Argenziano M, Stura I, Guiot C, Cavalli R., *From Micro- to Nano-Multifunctional Theranostic Platform: Effective Ultrasound Imaging Is Not Just a Matter of Scale*. *Mol Imaging*. 2018 Jan-Dec;17:1536012118778216. doi: 10.1177/1536012118778216.

Khadjavi A, Stura I, Prato M, Minero VG, Panariti A, Rivolta I, Gulino GR, Bessone F, Giribaldi G, Quaglino E, Cavalli R, Cavallo F, Guiot C. *'In Vitro', 'In Vivo' and 'In Silico' Investigation of the Anticancer Effectiveness of Oxygen-Loaded Chitosan-Shelled Nanodroplets as Potential Drug Vector*. *Pharm Res*. 2018 Feb 26;35(4):75. doi: 10.1007/s11095-018-2371-z.

Migliaretti, G., Ditaranto, S., Guiot, C., Vannelli, S., Matarazzo, P., Cappello, N., Stura, I., Cavallo, F. (2018). *Long-term response to recombinant human growth hormone treatment: A new predictive mathematical method*. *Journal of Endocrinological Investigation*, 1-10. 10.1007/s40618-017-0816-6

Migliaretti G, Magnani C, Bozzaro S, Siliquini R, Stura I, Krenghi M, Costa G, Cavallo F. *[Admission test to the degree course in Medicine and Surgery and university career: the experience in the campuses of Piedmont Region (Northern Italy)]*. *Epidemiol Prev*. 2017 Sep-Dec;41(5-6):250-255. doi: 10.19191/EP17.5-6.P250.085.

Migliaretti G, Bozzaro S, Siliquini R, Stura I, Costa G, Cavallo F, *Is the admission test for a course in medicine a good predictor of academic performance? A case-control experience at the school of medicine of Turin*. BMJ Open. 2017 Dec 1;7(11):e017417. doi: 10.1136/bmjopen-2017-017417.

D'Agata F, Ruffinatti FA, Boschi S, Stura I, Rainero I, Abollino O, Cavalli R, Guiot C., *Magnetic Nanoparticles in the Central Nervous System: Targeting Principles, Applications and Safety Issues*. Molecules. 2017 Dec 21;23(1). pii: E9. doi: 10.3390/molecules23010009.

Stura, I., Gabriele, D., Guiot, C., *A simple PSA-based computational approach predicts the timing of cancer relapse in prostatectomized patients*, (2016) Cancer Research, 76 (17), pp. 4941-4947.

Gabriele, D., Collura, D., Oderda, M., Stura, I., Fiorito, C., Porpiglia, F., Terrone, C., Zacchero, M., Guiot, C., Gabriele, P. *Is there still a role for computed tomography and bone scintigraphy in prostate cancer staging? An analysis from the EUREKA-1 database*, (2016) World Journal of Urology, 34 (4), pp. 517-523.

Stura, I., Venturino, E., Guiot, C., *A two-clones tumor model: Spontaneous growth and response to treatment*, (2016) Mathematical Biosciences, 271, pp. 19-28.

Stura, I., Priano, L., Mauro, A., Guiot, C., Venturino, E., *Double-layered models can explain macro and micro structure of human sleep*, (2013) International Journal of Neural Systems, 23 (2), art. no. 1350008.

In conference proceedings

Stura, I., *Smart (phone) Follow-app dopo prostatectomia: validazione di una nuova modalità di supporto alla decisione clinica e di relazione terapeutica*, (2017) Minerva Medica, Vol 108. Suppl. 2.

Perracchione, E., Stura, I., *An RBF-PSO based approach for modeling prostate cancer*, (2016) AIP Conference Proceedings, 1738, art. no. 390008.

Perracchione, E., Stura, I., *RBF kernel method and its applications to clinical data*, (2016) Dolomites Research Notes on Approximation, 9 (Special Issue), pp. 13-18.

Stura, I., Gaglioti, P., Todros, T., Guiot, C., *A multiscale model for the fetoplacental circulation in monochorionic twin pregnancies*, (2015) Procedia Computer Science, 51 (1), pp. 2734-2738.

Stura, I., Gabriele, D., Guiot, C., *A two population model of cancer growth with fixed capacity*, (2014) Proceedings of the 2014 6th International Advanced Research Workshop on In Silico Oncology and Cancer Investigation - The CHIC Project Workshop, IARWISOCI 2014, art. no. 7034636.

Scientific communications

With invitation letter

20th September 2018 *Modelling cancer growth and clinical database*, national congress of the Italian Society of Physics (SIF), Arcavacata di Rende, CS, Italy

February 2016 *Estimating the tumor growth: a RBF-PSO based method*, miniworkshop Kernel-based methods and function approximation, Torino

As speaker

22nd September 2019 *Total anatomical reconstruction during prostatectomy*, SISMEC, Rome
Silver Russell Syndrome: RBF-PSO mathematical model for the growth evaluation in patients exposed and not exposed to GH treatment, SISMEC, Rome.

7th November 2018 *Growth hormone treatment effectiveness: a predictive mathematical model*, SISMEC, Rome.

6th September 2018 *Assessing Radiotherapy Effectiveness in Prostate Cancer*, Virtual Physiological Human (VPH) Conference, Zaragoza, Spain

- 9th February 2018 *How much will you become taller?*, 9th Workshop of Dynamical Systems Applied to Biology and Natural Sciences (DSABNS 2018) in Torino, Italy
- 18th May 2017 *Statistical methods for data elaboration*, PhD seminar, Torino
- 24th February 2017 *Smart (phone) Follow-app dopo prostatectomia: validazione di una nuova modalità di supporto alla decisione clinica e di relazione terapeutica*, Congress in Candiolo, Torino
- 2nd December 2016 *Gimme a hand! Failure analysis in Medicine*, Seminars for Master students, Torino
- 7th October 2016 *O.D.E. della Natura*, Workshop Il Nettare della Matematica, Torino
- 30th September 2016 *Follow App: un amico per la prostata*, European Researchers' Night in Torino
- 28th March 2015 *Modeling prostate cancer within CHIC*, in the conference *Prostate carcinoma: reports from Eureka studies (CHIC project)* in Candiolo, Italy
- 23 – 29 September 2015 *An RBF-PSO based approach for modelling prostate cancer*, in the International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), Rhodes, Greece
- 1 – 3 June 2015 *A multiscale model for the fetoplacental circulation in the monochorionic twin pregnancies*, in the 15th International Conference on Computational Science (ICCS), Reykjavik, Iceland
- 3 – 4 November 2014 *A two population cancer growth with fixed carrying capacity*, 6th International Advanced Research Workshop on In Silico Oncology and Cancer Investigation – The CHIC Project Workshop (IARWISOCI), Athens, Greece
- 25 – 29 August 2014 *A two-clones model of tumor growth and its response to treatment*, MPDE14 Conference in Torino

Formative activities during Ph.D.

Conferences

- 24th November 2016 Intermediate Congress SISMEC: L'evoluzione della ricerca epidemiologica basata sugli archivi sanitari: uno sguardo al futuro, Pavia, Italy
- 26 – 28 September 2016 4th Virtual Physiological Human Conference, Amsterdam, Holland (presenting a poster)
- 30 – 31 March 2015 Miniworkshop *Advances in Numerical Analysis and Applications* in Torino
- 10 – 12 September 2014 3rd Virtual Physiological Human Conference, Trondheim, Norway (presenting a poster)

Courses

- 9th June 2017 *Migliorare la qualità della didattica universitaria: esperienze italiane a confronto*, University of Turin, Torino
- December 2016 *My first date with R*, Milano, Italy, corso introduttivo al programma R
- November 2016 *Social Media e Crowdfunding per il Non Profit*, The Fundraising School, Aiccon, Forlì, Italy
- October 2016 *Essential public speaking skills for postdocs*, workshop organized by University of Torino
- May 2016 *Fundraising Management*, The Fundraising School, Aiccon, Forlì, Italy
- April 2016 *Principi e tecniche di Fundraising*, The Fundraising School, Aiccon, Bertinoro, Italy
- November 2015 – March 2016 *Scientific English course level B1/B2*, organized by University of Torino (Prof. J.A. Walus), passing the final test
- March 2016 *#farnascereisoldi*, the first University Laboratory of Fundraising organized by Fondo Fondazione Ricerca e Talenti in collaboration with University of Torino
- March 2016 *Enabling technologies in 3D cancer organoids*, organized by University of Torino
- 2015 *Some recent models in mathematical biology*, course at the Dept. of Mathematics in Torino, final vote: A
- September 2014 *Mathematical models and methods for living systems*, CIME-CIRM course in Levico Terme, Italy
- July 2014 *Essere giovani protagonisti in H2020: il CV e opportunità di finanziamento attraverso la mobilità internazionale*, organized by University of Torino