Imad Abugessaisa' CV

Current affiliation

Riken Center for Life Science Technologies (CLST)
Division of Genomic Technologies (DGT)
Large scale data managing (LSDM)
1-7-22 Suehiro-cho, Tsurumi-Ku, Yokohama, kanagawa, 230-0045 japan
PHONE: +81 90 6307 2320 | FAX: +81 45 503 9216

Education

1. Postdoctoral, (Medical informatics, 2012), Karolinska Institute, Sweden
2. Ph.D.(Computer Science, 2008), Linköping University, Sweden
3. M.Sc. (Geoinformatics, 2005), Linköping University, Sweden
4. M.Sc. (Computer &Information Science, 2002) ,Gazera university, Sudan
5. B.Sc.(Computer Science, 1999) , Future University, Sudan
6. Effective leadership program, Leadership management Institute, Texas, USA (2011-2012) (course offered in Stockholm, Sweden)
7. Project/ Resource Capacity management in contract R&D Research, (2002),UNESCO
8. Basic Web Technology Skills for courseware Development, (2001), American University of Beirut.

Jobs and appointments

Title of post	Place	Place	From	To
Research scientist	Division of Genomics Technologies, Riken	Japan	20140301	onwards
Assistant prof.	Department of Medicine, Karolinska institute	Sweden	20120301	20140228
Postdoc Fellow	Department of Medicine, Karolinska institute	Sweden	20100301	20120229
Guest lecturer[1]	Dublin Institute of Technology, Ireland	Ireland	20101115	20101217
R&D specialist-SDI	Future Position X	Sweden	20081001	20100228
Researcher	SICS East Swedish ICT AB	Sweden	20080601	20081031
Guest lecturer	University of Malawi,	Malawi	20070828	20070930
Guest researcher	Università Basilicata	Italy	20070501	20070517
Guest lecturer	University of Malawi,	Malawi	20060828	20060930
Doktorand	Linkoping University	Sweden	20030903	20080612
Lecturer	Future university	Sudan	20021223	20030830
Project supervisor	Future university	Sudan	20000201	20021222

Description of current research

At the Large Scale Data Managing Unit, Division of Genomics Technologies, CLST, Riken, My research focused on research questions targeting databases and how to develop data driven techniques including but not limited to Very Large Scale Database (VLDB), Database modeling, and Semantic techniques the main aim is to facilitate creation, management, and access of heterogeneous, large-scale and distributed life science databases.

---

[1] Distance course

At DGT, Riken my current research focused on FANTOM5 database integration and management. *See*

1- http://fantom.gsc.riken.jp/5/
2- http://fantom.gsc.riken.jp/5/sstar/Main_Page

Academic services

- **Editorial board**
  1. Member of the editorial board of the International Journal on Advances in Intelligent Systems.
  2. Member of the European Society for Translational Medicine (EUSTM) Expert Panel on Data Management.
  3. Member of the Editorial Board of Expert Reviews of Immunology Vaccines and Informatics
  4. Member of the Editorial Board of Journal of Information, Pak Publishing Group
- **Reviewer International journal**
  1. Accident Analysis & Prevention – Elsevier 2009-
  2. International Journal of Applied Earth Observation and Geoinformation– Elsevier 2011
  3. BMC System Biology
  4. BMC Journal of Translational Medicine
  5. 15th Americas Conference on Information Systems, San Francisco, California, August 6 - 9, 2009.
- **Program committee member for conference**
  1. IADIS, Multi-conference on Computer Science and Information Systems, 2009 Portugal, 2010- Germany, 2011, Italy.
  2. Program committee member of COLLA 2011 – onwards
  3. International Conference on Advanced Collaborative Networks.
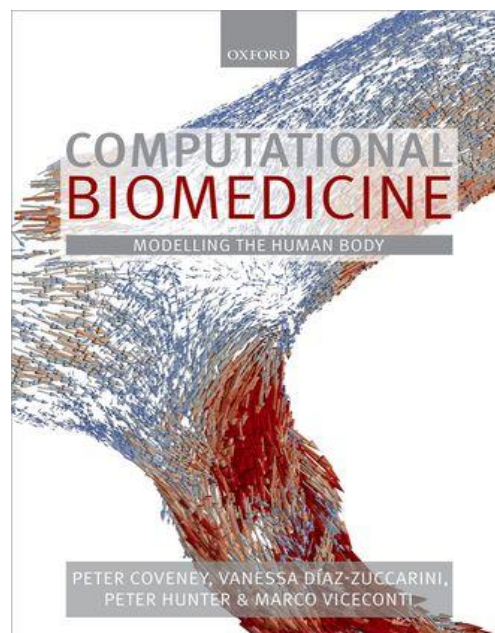
Publication list

1. Arner, E., C. O. Daub, K. Vitting-Seerup, R. Andersson, B. Lilje, F. Drablos, A. Lennartsson, M. Rönnerblad, O. Hrydziuszko, M. Vitezic, T. C. Freeman, A. Alhendi, P. Arner, R. Axton, J. K. Baillie, A. Beckhouse, B. Bodega, J. Briggs, F. Brombacher, M. Davis, M. Detmar, A. Ehrlund, M. Endoh, A. Eslami, M. Fagiolini, L. Fairbairn, G. J. Faulkner, C. Ferrai, M. E. Fisher, L. Forrester, D. Goldowitz, R. Guler, T. Ha, M. Hara, M. Herlyn, T. Ikawa, C. Kai, H. Kawamoto, L. Khachigian, P. S. Klinken, S. Kojima, H. Koseki, S. Klein, N. Mejhert, K. Miyaguchi, Y. Mizuno, M. Morimoto, K. J. Morris, C. Mummery, Y. Nakachi, S. Ogishima, M. Okada-Hatakeyama, Y. Okazaki, V. Orlando, D. Ovchinnikov, R. Passier, M. Patrikakis, A. Pombo, X.-Y. Qin, S. Roy, H. Sato, S. Savvi, A. Saxena, A. Schwegmann, D. Sugiyama, R. Swoboda, H. Tanaka, A. Tomoiu, L. N. Winteringham, E. Wolvetang, C. Yanagi-Mizuochi, M. Yoneda, S. Zabierowski, P. Zhang, **I. Abugessaisa**, N. Bertin, A. D. Diehl, S. Fukuda, M. Furuno, J. Harshbarger, A. Hasegawa, F. Hori, S. Ishikawa-Kato, Y. Ishizu, M. Itoh, T. Kawashima, M. Kojima, N. Kondo, M. Lizio, T. F. Meehan, C. J. Mungall, M. Murata, H. Nishiyori-Sueki, S. Sahin, S. Sato-Nagao, J. Severin, M. J. L. de Hoon, J. Kawai, T. Kasukawa, T. Lassmann, H. Suzuki, H. Kawaji, K. M. Summers, C. Wells, F. Consortium, D. A. Hume, A. R. R. Forrest, A. Sandelin, P. Carninci and Y. Hayashizaki (2015). "Transcribed enhancers lead waves of coordinated transcription in transitioning mammalian cells." Science DOI: 10.1126/science.1259418.
2. Lizio, M., J. Harshbarger, H. Shimoji, J. Severin, T. Kasukawa, S. Sahin, **I. Abugessaisa**, S. Fukuda, F. Hori, S. Ishikawa-Kato, C. Mungall, E. Arner, J. Baillie, N. Bertin, H. Bono, M. de Hoon, A. Diehl, E. Dimont, T. Freeman, K. Fujieda, W. Hide, R. Kaliyaperumal, T. Katayama, T. Lassmann, T. Meehan, K. Nishikata, H. Ono, M. Rehli, A. Sandelin, E. Schultes, P. 't Hoen, Z. Tatum, M. Thompson, T. Toyoda, D.

Wright, C. Daub, M. Itoh, P. Carninci, Y. Hayashizaki, A. Forrest and H. Kawaji (2015). "Gateways to the FANTOM5 promoter level mammalian expression atlas." Genome Biology 16(1): 1-14.

3. Gomez-Cabrero, D., Menche, J., Cano, I., **Abugessaisa, I**., Huertas-Migueláñez, M., Tenyi, A., Marin de Mas, I., Kiani, N., Marabita,F., Falciani, F., Burrowes, K., Maier, D., Wagner, P., Selivanov, V., Cascante, M., Roca, J., Barabási, A-L., Tegnér, J. (2014), "Systems Medicine: from molecular features and models to the clinic in COPD", Journal of translational medicine. 2014; 12:S4

4. **Abugessaisa I**, Saevarsdottir S, Tsipras G, Lindblad S, Sandin C, Nikamo P, Ståhle M, Malmström V, Klareskog L, Tegnér J. (2014) Accelerating Translational Research by Clinically Driven Development of an Informatics Platform–A Case Study. *PLoS ONE* 2014, **9:**e104382.

5. Gomez-Cabrero, D., **Abugessaisa, I.,** Maier, D., Teschendorff, A., Merkenschlager, M., Gisel, A., Ballestar, E., Bongcam-Rudloff, E., Conesa A., and Tegnér, J., (2014), "Data integration in the era of omics: current and future challenges", BMC Systems Biology 2014, 8(Suppl 2):I1

6. Rafael H., Boix-Chova, N., Gómez-Cabrero, D., Tegnér, J., **Abugessaisa, I.,** Conesa, A.," STATegra EMS: an Experiment Management System for complex next-generation omics experiments" BMC Systems Biology 2014, 8(Suppl 2):S9.

7. **Abugessaisa I,** Gomez-Cabrero D, Snir O, Lindblad S, Klareskog L, Malmstrom V, et al. Implementation of the CDC translational informatics platform--from genetic variants to the national Swedish Rheumatology Quality Register. Journal of translational medicine. 2013; 11:85.

8. Tegnér, J. & **Abugessaisa, I.** (2013) Pediatric systems medicine: evaluating needs and opportunities using congenital heart block as a case study. Pediatr Res advance online publication, February 27, 2013; doi:10.1038/pr.2013.19

9. **Abugessaisa, I.,** and Östman, A., (2011), Testing-SDI: e-Government Prospective, Requirements, and Challenges, The International Journal of Public Information Systems, ISSN 1653-4360, Vol. (2011: 1), pp 11- 47.

10. **Abugessaisa, I.,** (2010) 'Geospatial metadata extraction from product description document applying methods from ontology engineering', Int. J. Metadata, Semantics and Ontologies, Vol. 5, No. 4, pp.321–332. Inderscience Publishers.

11. **Abugessaisa I.,** (2008), Knowledge discovery in road accidents database integration of visual and automatic data mining methods, The International Journal of Public Information Systems, ISSN 1653-4360, Vol. (2008: 1), pp 59- 85.

12. **Abugessaisa, I.,** and Tegner, J. (2010), Biomedical Vertical Data Warehouse Integration: Assessment of Challenges and Opportunities at the Center of Excellence for Research on Inflammation and Cardiovascular Disease, Virtual Physiological Human conference, 30th September to 1st October, 2010, Brussels.

13. **Abugessaisa, I.,** and Tanzili, S. (2010) Testing of Geoportals: INSPIRE demands and challenges, The INSPIRE Conference 2010, 23 to 25 June 2010 in Kraków , Poland.

14. **Abugessaisa, I**., and Sivertun, Å., (2009), ICT in regional networks in the field of culture and development cooperation, In the proceedings of the 15th Americas Conference on Information Systems, San Francisco, California, August 6 – 9, 2009,Paper 331.

15. Östman, A., **Abugessaisa, I.,** Tanzili, S., He, X., El-Makawi, M., (2009) GeoTest: an Environment for Testing Swedish Geodata, Global Spatial Data Infrastructure Association 11 World Conference, 15-19 June 2009, Rotterdam, Netherland.

16. **Abugessaisa, I.,** (2008), Turing road accidents statistic into knowledge, International seminar on innovative approaches to turning statistics into knowledge, arranged jointly by Statistics Sweden and the OECD. 26-27 May 2008 in Berns Salonger, Stockholm, Sweden.

17. **Abugessaisa, I.**, Sivertun Å., and Le Duc M., (2007), A systemic view on Swedish traffic road accident data acquisition system, in proceeding of the VTI 14th International Conference on Road Safety on Four Continents (RS4C), Bangkok, Thailand, on 14-16 November 2007.

18. **Abugessaisa, I.,** Sivertun Å., and Le Duc M., (2007), GLOBESAFE: A platform for information sharing among road safety organizations, In proceeding of IFIP-W.G. 9th International Conference on Social Implications of Computers in Developing Countries, May 2007, São Paulo, Brazil. ISSN 1981-3945.

19. **Abugessaisa, I.**, Sivertun Å., and Le Duc M., (2006) Map as Interface for shared information: A Study of design principles and user interaction satisfaction In proceeding of The IADIS International Conference WWW/Internet, University of Murcia, Spain.

20. **Abugessaisa I.**, and Sivertun Å., (2005) Benchmarking Road Safety Situations Using OGC Model of Portrayal Workflow, In proceeding of The 13th International Conference on Geoinformatics (GeoInformatics'5), Ryerson University. Canada.

21. **Abugessaisa, I.,** Sivertun Å., (2004), Ontological Approach to Modeling Information Systems. In Proceedings of the Fourth international Conference on Computer and information Technology (Cit'04) – Volume 00 (September 14 – 16, 2004). CIT. IEEE Computer Society, Washington, DC, 1122-1127.

Chapter in book

1. **Abugessaisa, I**., Gomez-Cabrero, D., Tegnér, J., (2014) Molecular Foundations of Computational Bioscience, chapter in book, Computational biomedicine: modelling the human body. Edited by Coveney P, Díaz-Zuccarini V, Hunter P, Viceconti M, Oxford: Oxford University Press.

Technical reports

1. Friesland, S., Lewensohn, R., Masucci, M., Keros,D.,Tanushi, H., **Abugessaisa, I.,** Petris, L., Wageinus, G., Wersäll, P.,Lindberg, K.,Sharp,L., Wallberg, S., Rundgren, J.,(2014), Infrastructure development for the implementation of Swedish national database in oncology specifically related to diagnosis and treatment of lung cancer, Project report from Oncology Clinic, Karolinska University Hospital Stockholm to Stockholm County Council "SLL", Sweden.

2. Tanzilli, S. and **Abugessaisa, I**. (2009) Results of the data specifications testing of the infrastructure for spatial information in Europe (INSPIRE) directive Annex I to the EU Joint Research Center (JRC) and Swedish Land Survey (Lantmäteriet) on Five themes (Addresses, Cadastral areas, Transport network, Geographical names, Hydrography and Metadata.

3. Sivertn, Å., **Abugessaisa, I.,** (2008), ICT in regional and global networks in the field of culture and development cooperation, Technical report , Swedish International Development Agency, Division for Culture and Media.

4. Asp K., Lindskog P., Sivertun Å., Ghazwan A., **Abugessaisa, I.**, (2005), Applying ICT for technology transfer in order to achieve a sustainable system in higher education, Project report from Linköping University to the Swedish Program for ICT in Developing regions, "SPIDER".

Invited speaker
- Invited to give talk at the OECD, joint transport research Centre meeting on international traffic safety data and analysis, 23 and 24 of March 2009. Paris, France.
- European Society for Translational Medicine conference October 2013, Mondorf Parc Hotel, Mondorf-les-Bains, Grand-Duchy of Luxembourg

E-learning courses
1- Schema matching, mapping and transformation for INSPIRE, hosted by **Katholicke Universiteit at Leuven, Belgium**, (2010). Course leader Prof. Dr. Anders Östman and Dr Imad Abugessaisa.
2- Schema matching, mapping and transformation for INSPIRE, hosted **University of Life Sciences in Aas, Norway**, (2009). course leader Prof. Dr. Anders Östman and Dr Imad Abugessaisa

Media coverage & publicity
1. **GävleMagasinet,** EU INSPIRE data specifications testing, FPX har hittat sin position i Teknikparken, GävleMagasinet, 14/11, 2008. http://gavlemagasinet.se/articles/view/fpx-har-hittat-sin-position-i-teknikparken

2. **Medicinsk Vetenskap** , T-MedFusion project interview - Medicinsk Vetenskap nr 1 2012, http://issuu.com/karolinska_institutet/docs/mv_nr_1_2012/46

3. **The independent,** Computer simulation could become 'integral' in the diagnosis, treatment, or prevention of disease by the end of the century, Sunday 15 June 2014. http://www.independent.co.uk/news/science/computer-simulation-could-become-integral-in-the-diagnosis-treatment-or-prevention-of-disease-by-the-end-of-the-century-9537730.html

"Computational Biomedicine: Modelling the Human Body is the world's first textbook dedicated to the direct use of computer simulation in the diagnosis, treatment, or prevention of a disease. It claims that such technology will be "integral" to the way clinical decisions are made in the UK's operating theatres by the end of this century."

EU projects FP6 and FP7

During the last few years I have been involved in several EU FP6 and FP7 projects including the following:

1. Infrastructure for spatial information in Europe, INSPIRE, 2008-2010
2. The 35 MEuro Innovative Medicines Initiative (IMI) project BTCure and AbiRisk 2012-2013.
3. Synergy-COPD 2012
4. Stategra 20012
5. Frailomic 2012
6. CASYM 2012-2014

Swedish research council VR – Vetenskapsrådet projects

1. Center of Excellence for Research on Inflammation and Cardiovascular disease CERIC 2010-2012, KI, Sweden
2. Swedish e-Science program 2011-2013, Sweden

Sweden's innovation agency VINNOVA and others

1. Patientkunskap 2012-2014
2. Projekt 4D Informatik 2012 – 2014

Research grants

Grant	Country	Year	Role	Project Title	Amount in $US
Ph.D. Scholarship	Sudan / Sweden	2003-2008	PI	Information sharing among road safety organizations	40,000.00
The Swedish Program for ICT in Developing regions.	Sweden	2006	Co-PI	Applying ICT for technology transfer in order to achieve a sustainable system in higher education	8,000.000
Linneus-Palme foundation	Sweden	2006	Co-PI	Guest lecturer in Malawi	10,000.000
Linneus-Palme foundation	Sweden	2007	Co-PI	Guest lecturer in Malawi	10,000.000
Swedish International Development Agency	Sweden	2008	Co-PI	ICT in regional and global networks in the field of culture and development cooperation	80,000.000
Åke Wiberg foundation	Sweden	2013-2014	PI	Predicting and preventing occupational disease patterns: An integrative utilization and network analysis of registers and genomics data	30,000.00