The analysis of regulatory sequences

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Team composition

SCMBB - Bruxelles - Belgium

Unit "Analysis of Biochemical, Regulation and Interaction Networks"

Lah director

Olivier Sand	Postdoc	evaluation of pattern discovery approaches
Rekin's Janky	DEA 2002 + PhD	evolution of bacterial metabolism and regulation
Sylvain Brohée	DEA 2003 + PhD	networks of interactions between membrane proteins
Jean-Valéry Turatsinze	DEA 2005 + PhD	evaluation of pattern matching approaches in human; regulatory elements involved in development
Dimitrios Paraskevas	DEA 2005	phylogenetic footprints
Carlos Moreira Conde da Silva	master	unsupervised classification of regulatory sequences
Kevin Wielemans	master	evolution of nitrogen regulation in fungi

transcriptional regulation of protein complexes

Previous researchers

Shoshana Wodak

Oriosilaria Wodak	Lab director	transcriptional regulation of protein complexes
Nicolas Simonis	PhD 2005	transcriptional regulation of protein complexes
Didier Croes	PhD 2005	Path finding in metabolic networks
Joseph Tran	DEA 2002 + PhD	Inference of metabolic pathways from microarrays
Didier Gonze	DEA 2001 + Postdoc 2003	Supervised classification of regulatory sequences,
		expression profiles of yeast protein complexes.

Previous students

Ahmed Essaghir	DEA 2005	analysis of microarrays and promoters in Plasmodium
Raymond Kalimunda	DEA 2005	development of a pattern assembly algorithm
Mehdi Jbel	DEA 2005	evolution of nitrogen regulation in fungi
Pierre Jonniaux	DEA 2004	Test of phylogenetic footprint approaches
Fabian Couche	graduate 2003	algorithms to find the k shortest paths in weighted graphs
Patrice Chagnaud	DEA 2001	Prediction of Nitrogen-regulated genes in yeast
Hassan Ghazal	DEA 2001	Analysis of plant promoters
Magali Lescot	DEA 2001	Pattern discovery in plant promoters
Mehdi Jbel Pierre Jonniaux Fabian Couche Patrice Chagnaud Hassan Ghazal	DEA 2004 graduate 2003 DEA 2001 DEA 2001	evolution of nitrogen regulation in fungi Test of phylogenetic footprint approaches algorithms to find the k shortest paths in weighted graphs Prediction of Nitrogen-regulated genes in yeast Analysis of plant promoters

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Analysis of Biochemical, Regulation and Interaction Networks

Olivier Sand (postdoc)

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Jean-Valéry Turatsinze (graduate 2005 - PhD)

Dimitrios Paraskevas (DEA 2006)

Carlos Moreira Conde da Silva (graduate 2006)

Kevin Wielemans (graduate 2006)

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Nicolas Simonis (PhD 2005)

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Previous students

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Pierre Jonniaux (DEA 2004)

Fabian Couche (graduate 2003)

Hassan Ghazal (DEA 2001)

Magali Lescot (DEA 2001)

Patrice Chagnaud (DEA 2001)

Collaborations (on regulatory sequences)

CIFN - Cuernavaca - Mexico

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Links and publications on regulatory sequences

Regulatory sequence analysis tools http://rsat.scmbb.ulb.ac.be/rsat/ Reprints and preprints http://www.scmbb.ulb.ac.be/Users/jvanheld/papers/

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- van Helden, J., del Olmo, M. & Perez-Ortin, J. E. (2000). Statistical analysis of yeast genomic downstream sequences reveals putative polyadenylation signals. Nucleic Acids Res 28(4), 1000-10.
- van Helden, J., Gilbert, D., Wernisch, L., Schroeder, M. & Wodak, S. (2001). Applications of regulatory sequence analysis and metabolic network analysis to the interpretation of gene expression data. Lecture Notes in Computer Sciences 2066, 155-172.
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- 12. Gonze, D., S. Pinloche, O. Gascuel, and J. van Helden. 2005. Discrimination of yeast genes involved in methionine and phosphate metabolism on the basis of upstream motifs. *Bioinformatics* **21**: 3490-3500..
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