

Rebecka Jenny Jörnsten

CONTACT INFORMATION

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Mathematical Sciences
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RESEARCH INTERESTS

Model Selection. Data integration. Systems Biology. Interface of information theory and statistics.

EDUCATION

Ph.D. in Statistics, December 2001. University of California at Berkeley
Data compression and Its Statistical Implications, with applications to the analysis of Microarray images. Advisor: Bin Yu

M.A. in Statistics, May 1998. University of California at Berkeley

M.Sc. in Engineering Physics, May 1996. Lund Institute of Technology, Lund, Sweden
Sub-pixel resolution in PIXE images. Advisor: Anders Holtsberg

PROFESSIONAL APPOINTMENTS

Professor, Mathematical Sciences, Chalmers/University of Gothenburg, June 2016 - present

Associate Professor, Mathematical Sciences, Chalmers/University of Gothenburg, January 2009 - June 2016 (Maternity leave June 2013 - October 2014)

Associate Professor with Tenure, Department of Statistics and Biostatistics, Rutgers University, July 2008 - December 2008

Assistant Professor, Department of Statistics and Biostatistics, Rutgers University, January 2002- June 2008.

Consultant, Math Center, Lucent Bell Labs, Murray Hill, New Jersey, Sep 1998, April 2000

GRANTS AND AWARDS

- Research Award. University of Gothenburg, Faculty of Science, 2017. 250tKr.
- SSF: Systems Biology. "Focus on glioblastoma: using patient-derived cells to decipher tumor expansion and evaluate new treatments.". (2017-2021). co-PI (PI Sven Nelander). (30000tKr of which 25% time for co-PI + postdoc and PhD student).
- SSF: Big Data. "Integrative precision medicine: local data, global context". (2017-2021). co-PI (PI Sven Nelander). (30000tKr of which 25% time for co-PI + postdoc and PhD student).
- Vetenskapsrådet (Swedish Research Council) Project Research Grant, "Network modeling for large-scale human cancer studies: data integration, validation and multiresolution networks." (2014-2017) PI. (5060tKr)
- Astra Zeneca: "The SciLifeLab cancer stem cell program: systems-scale analysis and prospective modeling of cancer stem cells from patients". 2014-2018. co-PI. PI is Sven Nelander. (20000tKR of which 1085tKr for co-PI)
- Knut & Alice Wallenberg foundation. "Stochastics for big data and big systems bridging local and global". 2012-2016. co-PI. PI Holger Rootzen.
- Åke Wibergs stiftelse. "Systembiologisk metodik för tumörforskning: effektiv identifiering och testning av biomarkörer och targets" Diariernr: 756194060 2012-2014 (co-PI, PI Sven Nelander, SciLife).
- Barncancerfonden. "Systematic experimental testing of in silico designed therapies and biomarkers against childhood neural tumors" Diariernr: PROJ11-057. 2012-2014 (co-PI, PI Sven Nelander, SciLife).

- Strategic Highway Research Program (SHRP 2). "Analysis of Naturalistic Driving Data - driver inattention and crash risk in rear-end collisions". 2011-2013 (co-PI, joint project with SAFER (vehicle and traffic safety center at Chalmers, Chalmers/GU Mathematical Sciences, Volvo cars).
- Vetenskapsrådet (Swedish Research Council) Project Research Grant, "Model Selection in Clustering and Multiple Testing", 2010-2012 (PI).
- Environmental Protection Agency RD-83272101-0 Bioinformatics Center grant, 2006-2008 (10%).
- National Science Foundation award DMS-0306360. "Clustering: visualization, validation and response oriented methods.", 2003-2006 (PI).
- National Science Foundation award DBI-0629346. "DNA barcode data analysis initiative: tools for a new generation of biodiversity data workshops. 2006-2007 (co-PI).
- National Science Foundation award "Eleventh New Researchers Conference in Statistics and Probability", 2008-2009 (PI).
- National Cancer Institute award "Eleventh and Twelfth New Researchers Conference in Statistics and Probability", 2008-2010 (PI).

REVIEWER OF RESEARCH GRANTS

- Norska forskningsrådet, 2017.
- SSF, 2017.
- National Science Foundation, Division of Mathematical Sciences, 2009. National Cancer Institute, R13 grants, 2008-2010 National Security Agency, Mathematical sciences, 2010. NSERC, 2008

PH.D. STUDENTS

- Jose Sanchez, 2009-2014. *Network models with applications to genomic data: generalization, validation and uncertainty assessment*. Current position: Bioinformatician, Sahlgrenska.
- Jonatan Kallus 2014-present. Tentative title of thesis: *Model selection and validation challenges in high-dimensional biology*.
- Oskar Allerbo, 2017-
- Teresia Kling, 2010-2015. (co-advisor, main advisor Sven Nelander). *System-scale modeling of cancer*.
- Alexandra Jauhainen (co-advisor, main advisor Olle Nerman). *Statistics in gene expression, metabolomics, and comparative genomics in evolution*. Degree conferred September 2010. Positions: postdoctoral researcher, Department of Statistics, University of Michigan (2010), postdoctoral researcher, Karolinska Institute, (2011-2014), senior analyst, Astra Zeneca, (2015-present).
- Patrik Johansson. 2012-present. (co-advisor, main advisor Sven Nelander).
- Satishkumar Baskaran, 2012-present. (co-advisor, main advisor Sven Nelander).

MASTER STUDENTS

- 2018: Daniel Thuresson, Olof Ekborg, Philip Arndt, Fredrik Beiron, Johan Bjrk, Adam Brinkman, Fredrik Kjernald, Karl Svensson.
- 2017: Andrew Nisbet, Leif Schelin, Alex Bergkvist, Sebastian Franzen, Filip Birve
- 2016: Björn Hedner, Nils Wireklint, Emilio Jorge, Pasha Hashemi, Ludvig Vikstrm, Oskar Lilja, Maja Fahlen
- 2015: Sofia Hjalmarsson, Sebastian Anerud, Susanne Pettersson, Linus Lundin
- 2002-2014: Johanna Svensson, Patrik Johansson, Viktor Skokic, Johanna Sigmundsdottir, Tobias Abenius, Eric Burlow, Owen Martin, Diane Richardson

SERVICE - LAST 5
YEARS:

EDITORIAL ACTIVITIES

- Editor for Journals of Statistical Software 2011-2013, 2015-present

SCIENTIFIC LEADERSHIP, ADMINISTRATION

- Chair, Cramer Society, 2016-present
- Institutionsrådet, 2011-present

SERVICE TO THE PROFESSION

- External reviewer, promotion application, KTH, 2017.
- External reviewer of applications for tenure track hiring, Uppsala, 2016
- External reviewer of applications for lektor position, Linköping University, 2016
- Ph.D. Committee:
 - Felix Rios, KTH, October 2017.
 - Opponent for Rezvan Ehsani, NTNU, September 2016
 - Kerstin Johnsson, Lund, September 2016
 - Harriet Melenius, Uppsala University, October 2015
 - Francesco Gatto, Chalmers, September 2015
 - Kristoffer Hellton, University of Oslo, February 2015
 - Ying Li, SLU, December 2014
 - Szilard Nemes, Sahlgrenska Academy, degree conferred December 2012.
 - P.O. Lindberg, Transport Research, Royal Institute of technology, conferred June 2012.
 - Opponent for Mattias Landfors, Statistics, Umeå University, conferred April 2012
 - Xia Shen, Genetics, Uppsala University, conferred April 2012
 - Loyal Goff, Molecular and Cell Biology, Rutgers, conferred April 2008
 - Weihua Tang, Statistics, Rutgers, conferred May 2006
 - Susanna Eyheramendy, Statistics, Rutgers, conferred May 2004

INVITED SPEAKER
PRESENTATIONS,
LAST 5 YEARS

- Invited speaker, Swedish Collegium for Advanced Study (SCAS) symposium, Oct 2017.
- Invited speaker, Karolinska, May 2017
- Invited speaker, Forth International Conference on Computational Biomedicine (CBM 2017), Florida, February 2017
- Invited speaker, Third International Conference on Computational Biomedicine (CBM 2016), Florida, February 2016
- Invited speaker, Karolinska, October 2015
- Invited speaker, SciLifeLab Day, October 2015
- Invited speaker, Data Science Workshop, Stockholm, December 2014.
- Invited speaker, LinStat, September 2014
- Keynote speaker, Sonja Kovalevska dagarna, Umeå, Nov 2012.
- Keynote speaker, Nordstat, June 2012
- Invited speaker, Karolinska Institute, May 2012
- Invited speaker, Stockholm University, April 2012
- Invited speaker, Uppsala University, February 2012

BIBLIOMETRIC
PARAMETERS

Number of peer-reviewed publications (excluding manuscripts, submission and revised submissions): **40**, of which 29 are journal papers and 11 are peer-reviewed book chapters or peer-reviewed conference papers.

H-index: 18 (Google Scholar)
i10-index: 29

Number of citations: 2601 (Google Scholar).

SCIENTIFIC PUBLICATIONS

1. Köpsen, M., Magnusson, R., Lövfors, W., Gawel, D., Nordling, T., Schulze, S., Nestor, C. E., **Jörnsten, R.**, Cedersund, G., Benson, M., Gustafsson, M. (2017). LASSIM a network inference toolbox for genome-wide mechanistic modelling. To appear in *PLoS Comp Biol*
2. Fei Sjöberg; Viktor Skokic; Cecilia Bull; **Rebecka Jörnsten**; Eleftheria Alevronta; Gail Dunberger; Karin Bergmark; Ulrica Wilderäng; Gunnar Steineck; (2017). Late Radiation-Induced Bowel Syndromes, Tobacco Smoking, Age at Treatment and Time since treatment Gynecological Cancer Survivors. To appear in *Acta Oncologica*. Citations: 1
3. Gunnar Steineck; Viktor Skokic; Fei Sjöberg; Cecilia Bull; Eleftheria Alevronta; Gail Dunberger; Karin Bergmark; Ulrica Wilderäng; Joseph O Deasy; **Rebecka Jörnsten** (2017). Identifying Radiation-Induced Survivorship Diseases Affecting Bowel Health. *PLoS One*, 12(2), e0171461. Citations: 2. IF: 3.54
4. Kling, T., Ferrarese, R., O hAilin, D., Heiland, D. H., Dai, F. P., Vasilikos, I., Weyerbrock, A., **Jörnsten, R.**, Carro, M. S., Nelander, S. (2016) Integrative modeling reveals ANXA2 as a determinant of mesenchymal transformation in glioma. *eBiomedicine*(12) 72-85 Citations: 5. IF: 1.96
5. Oh, Jung Hun; Thor, Maria ; Olsson, Caroline ; Skokic, Viktor; **Jörnsten, Rebecka**; Alsaadi, David; Pettersson, Niclas; Steineck, Gunnar; Deasy, Joseph (2016). A Factor Analysis Approach for Clustering Patient Reported Outcomes. *Methods of Information in Medicine* 55(5), DOI: 10.3414/ME16-01-0035. Citations: 2
6. Kling, T., Johansson, P., Sanchez, J., Marinescu, V.M., **Jörnsten, R.**, Nelander, S. (2015) Efficient exploration of pan-cancer networks by generalized covariance selection and interactive web content *Nuclear Acids Research*, 2015 *gkv413* PMID: 25953855 Citations: 10 IF: 6.63(6.03)
7. Barrenäs, F., Bruhn, S., **Jörnsten R.**, Langston, M., C., Nester, C., Rogers, G., Wang, H., Zhao, Y., and Benson, M. (2014) DNA methylation controls transcription factor binding in allergen-challenged CD4+ cells. *PLoS Genetics*, January 2014, 10(1), e1004059. PMID: 24391521 Citations 27. IF: 8.35(7.17)
8. The Cancer Genome Atlas Research Network; Genome Characterization Center, Chang K, Creighton CJ, Davis C, Donehower L, Drummond J, Wheeler D, Ally A, Balasundaram M, Birol I, Butterfield YS, Chu A, Chuah E, Chun HJ, Dhalla N, Guin R, Hirst M, Hirst C, Holt RA, Jones SJ, Lee D, Li HI, Marra MA, Mayo M, Moore RA, Mungall AJ, Robertson AG, Schein JE, Sipahimalani P, Tam A, Thiessen N, Varhol RJ, Beroukheim R, Bhatt AS, Brooks AN, Cherniack AD, Freeman SS, Gabriel SB, Helman E, Jung J, Meyerson M, Ojesina AI, Pedamallu CS, Saksena G, Schumacher SE, Tabak B, Zack T, Lander ES, Bristow CA, Hadjipanayis A, Haseley P, Kucherlapati R, Lee S, Lee E, Luquette LJ, Mahadeshwar HS, Pantazi A, Parfenov M, Park PJ, Protopopov A, Ren X, Santoso N, Seidman J, Seth S, Song X, Tang J, Xi R, Xu AW, Yang L, Zeng D, Auman JT, Balu S, Buda E, Fan C, Hoadley KA, Jones CD, Meng S, Mieczkowski PA, Parker JS, Perou CM, Roach J, Shi Y, Silva GO, Tan D, Veluvolu U, Waring S, Wilkerson MD, Wu J, Zhao W, Bodenheimer T, Hayes DN, Hoyle AP, Jeffreys SR, Mose LE, Simons JV, Soloway MG, Baylin SB, Berman BP, Bootwalla MS, Danilova L, Herman JG, Hinoue T, Laird PW, Rhie SK, Shen H, Triche T, Weisenberger DJ, Carter SL, Cibulskis K, Chin L, Zhang J, Getz G, Sougnez C, Wang M; Genome Data Analysis Center, Saksena G, Carter SL, Cibulskis K, Chin L, Zhang J, Getz G, Dinh H, Doddapaneni

- HV, Gibbs R, Gunaratne P, Han Y, Kalra D, Kovar C, Lewis L, Morgan M, Morton D, Muzny D, Reid J, Xi L, Cho J, Dicara D, Frazer S, Gehlenborg N, Heiman DI, Kim J, Lawrence MS, Lin P, Liu Y, Noble MS, Stojanov P, Voet D, Zhang H, Zou L, Stewart C, Bernard B, Bressler R, Eakin A, Iype L, Knijnenburg T, Kramer R, Kreisberg R, Leinonen K, Lin J, Liu Y, Miller M, Reynolds SM, Rovira H, Shmulevich I, Thorsson V, Yang D, Zhang W, Amin S, Wu CJ, Wu CC, Akbani R, Aldape K, Baggerly KA, Broom B, Casasent TD, Cleland J, Creighton C, Dodda D, Edgerton M, Han L, Herbrich SM, Ju Z, Kim H, Lerner S, Li J, Liang H, Liu W, Lorenzi PL, Lu Y, Melott J, Mills GB, Nguyen L, Su X, Verhaak R, Wang W, Weinstein JN, Wong A, Yang Y, Yao J, Yao R, Yoshihara K, Yuan Y, Yung AK, Zhang N, Zheng S, Ryan M, Kane DW, Aksoy BA, Ciriello G, Dresdner G, Gao J, Gross B, Jacobsen A, Kahles A, Ladanyi M, Lee W, Lehmann KV, Miller ML, Ramirez R, Rtsch G, Reva B, Sander C, Schultz N, Senbabaoglu Y, Shen R, Sinha R, Sumer SO, Sun Y, Taylor BS, Weinhold N, Fei S, Spellman P, Benz C, Carlin D, Cline M, Craft B, Ellrott K, Goldman M, Haussler D, Ma S, Ng S, Paull E, Radenbaugh A, Salama S, Sokolov A, Stuart JM, Swatoski T, Uzunangelov V, Waltman P, Yau C, Zhu J, Hamilton SR; Sequencing Center, Getz G, Sougnez C, Abbott S, Abbott R, Dees ND, Delehaunty K, Ding L, Dooling DJ, Eldred JM, Fronick CC, Fulton R, Fulton LL, Kalicki-Veizer J, Kanchi KL, Kandoth C, Koboldt DC, Larson DE, Ley TJ, Lin L, Lu C, Magrini VJ, Mardis ER, McLellan MD, McMichael JF, Miller CA, O'Laughlin M, Pohl C, Schmidt H, Smith SM, Walker J, Wallis JW, Wendl MC, Wilson RK, Wylie T, Zhang Q; Data Coordinating Center, Burton R, Jensen MA, Kahn A, Pihl T, Pot D, Wan Y; Tissue Source Site, Levine DA; Biospecimen Core Resource Center, Black AD, Bowen J, Frick J, Gastier-Foster JM, Harper HA, Helsel C, Leraas KM, Lichtenberg TM, McAllister C, Ramirez NC, Sharpe S, Wise L, Zmuda E; National Cancer Institute/National Human Genome Research Institute Project Team, Chanock SJ, Davidsen T, Demchok JA, Eley G, Felau I, Ozenberger BA, Sheth M, Sofia H, Staudt L, Tarnuzzer R, Wang Z, Yang L, Zhang J; Collaborators, Omberg L, Margolin A, Raphael BJ, Vandin F, Wu HT, Leiserson MD, Benz SC, Vaske CJ, Noushmehr H, Knijnenburg T, Wolf D, Veer LV, Collisson EA, Anastassiou D, Ou Yang TH, Lopez-Bigas N, Gonzalez-Perez A, Tamborero D, Xia Z, Li W, Cho DY, Przytycka T, Hamilton M, McGuire S, Nelander S, Johansson P, **Jörnsten R**, Kling T, Sanchez J, Weinstein JN, Collisson EA, Mills GB, Shaw KR, Ozenberger BA, Ellrott K, Shmulevich I, Sander C, Stuart JM. (2013) The Cancer Genome Atlas Pan-Cancer analysis project. *Nature Genetics*, 2013 Sep 26;45(10):1113-20. doi: 10.1038/ng.2764. Published as TCGA collaborator. PMID: 24071849 Citations 1195. IF: 9.26 (13.45).
9. Moreau, M.P., Bruse, S.E., **Jörnsten, R.**, Liu, Y., Brzustowicz, L.M. (2013) Chronological Changes in MicroRNA Expression in the Developing Human Brain. *PLoS One* 8(4): e60480. doi:10.1371/journal.pone.0060480. PMID: 23613727 Citations: 25. IF: 4.49(3.54)
 10. Gerlee, P., Schmidt, L., Monsefi, N., Kling, T., **Jörnsten, R.**, Nelander, S. (2013) Searching for Synergies: Matrix Algebraic Approaches for Efficient Pair Screening *PLoS One* 8(7): e68598. doi:10.1371/journal.pone.0068598. PMID: 23935877 Citations: 4. IF: 4.49(3.54)
 11. Vickhoff, B., Malmgren, H., Åström, R., Nyberg, G., Ekström, S.R., Engvall, M., Snygg, J., Nilsson, M., **Jörnsten, R.** (2013) Music structure determines heart rate variability of singers. *Frontiers in Psychology* 2013; 4: 334: *Auditory and Cognitive Neuroscience*, 09 July 2013, doi.org/10.3389/fpsyg.2013.00334 PMID: 23847555 Citations: 83. IF: 4.01(3.92)
 12. Abenius, T., **Jörnsten, R.**, Schmidth, L., Sanchez, J., Nelander, S. (2012) System scale network modeling using EPoC. *Advances in Experimental Medicine and Biology, Springer series (ICSB), Volume 736, Part 5, 617-643, DOI: 10.1007.978-1-4419-7210-1-37* PMID: 22161356 Citations: 2
 13. Jauhainen, A., Nerman, O., Michailidis, G., **Jörnsten, R.** (2012) Transcriptional and metabolic data integration and modeling for pathway identification. *Biostatistics* 13(4), 748-761, doi: 10.1093/biostatistics/krs016. PMID: 22699861 Citations: 11. IF: 2.427(2.543)
 14. Barrenäs, F., Couto Alves, A., Chavali, S., Coin, L, Jarvelin, M-R., **Jörnsten, R.**, Langston, M.A., Ramasamy, A., Rogers, G., Wang H., Benson, M. (2011) Highly interconnected complex disease genes are enriched for disease-associated polymorphisms. *Genome Biology* 2012, 13(46), doi:10.1186/gb-2012-13-6-r46 PMID: 22703998 Citations: 38. IF: 9.52(13.02)
 15. **Jörnsten, R.**, Abenius, T., Kling T., Schmidt, L., Johansson, E., Nordling, T., Nordlander, B., Sander, C., Gennemark, P., Funari, K., Nilsson, B., Lindahl, L., Nelander, S. (2011) Network modeling of the transcriptional effects of copy number aberrations in glioblastoma. *Molecular Systems Biology* 7: 486 doi:10.1038/msb.2011.17 PMID: 21525872 Citations: 76. IF: 9.93(10.13)

16. Abel, F., Dalevi, D., Nethander, M., **Jörnsten, R.**, De Preter K., Vermulen, J., Stallings, R., Kogner, R., Maris, J., Nilsson, S. (2011) A 6-gene signature identifies four molecular subgroups of neuroblastoma. *Cancer Cell Int.* 11(1):9 PMID: 21492432 Citations: 18. IF: 3.26(2.88)
17. Rodriguez-Saona, C.R., Polavarapu, S., Barry J.D., Pol, D., **Jörnsten, R.**, Oudemans, P.V., Liburd, O.E. (2010) Color preference, seasonality, spatial distribution and species composition of thrips (Thysanoptera: Thripidae) in northern highbush blueberries. *Crop Protection*, 29(11):133-1340, Nov 2010 Citations: 12. IF: 1.91(2.12)
18. **Jörnsten, R.** (2009) Simultaneous subset selection via rate-distortion theory, with application to clustering and significance analysis of gene expression data. *Journal of Computational and Graphical Statistics. September 1, 2009*, 18(3): 613-639. doi:10.1198/jcgs.2009.07043. Citations: 2. IF: 1.79(1.28)
19. **Jörnsten, R.**, and Keles, S. (2008) MIXL, Multi-level mixture modeling, with application to the analysis of multi-factor gene expression studies. *Biostatistics* 9(3): 540-554. PMID: 18256042 Citations: 12. IF: 3.394(2.543)
20. **Jörnsten, R.**, Wang, H-Y., and Ouyang, M. (2007) A Meta-data based method for DNA microarray imputation. *BMC Bioinformatics* 8(109):doi:10.1186/1471-2105-8-109 PMID: 17394658 Citations: 22. IF: 4.42(2.97)
21. Goff, L.A., Davila, J., **Jörnsten, R.**, Keles, S. and Hart, R. (2007) Bioinformatic analysis of neural stem cell differentiation. *Journal of Biomolecular Techniques* 18:205-212 PMID: 17916793 Citations: 16. IF: 2.65(1.62)
22. Lakshmiopathy, U., Love, B., Goff, L., **Jörnsten, R.**, Graichen, R., Hart, R.P., Chesnut, J.D (2007) Micro RNA expression pattern of undifferentiated and differentiated human embryonic stem cells. *Stem Cells and Development* 16:1-14 PMID: 18004940 Citations: 181. IF: 4.23(2.23)
23. Lopez-Pintado, S., and **Jörnsten, R.** (2006) Functional analysis via extensions of the Band Depth. *IMS Lecture Series, Volume 54, ed. R. Liu et al, p. 103-120* Citations: 24.
24. Charych, E., Akum, B., Goldberg, J.S., **Jörnsten, R.J.**, Rongo, C., and Firestein, B.L. (2006) Activity-Independent Regulation of Dendrite Patterning by Postsynaptic Density Protein PSD-95. *The Journal of Neuroscience, October 4, 2006*, 26(40):10164-10176; PMID: 17021172 Citations: 106. IF: 8.46(6.92)
25. Chen, M., Lucas, K.G., Akum, B.F., Balsingam, G., Stawicki, T.M., Provost, J.M., Riefler, G.M., **Jörnsten, R.J.**, and Firestein, B.L. (2005) Novel Role for Snapin in Dendrite Patterning: Interaction with Cypin. *Molecular Biology of the Cell, Vol. 16, Issue 11, 5103-5114, November 2005.* PMID: 16120643 Citations: 45. IF: 5.89(1.27)
26. **Jörnsten, R.**, Wang H-Y., Welsh, W.J., and Ouyang, M. (2005) DNA microarray data imputation and significance analysis of differential expression. *Bioinformatics* 2005 21(22):4155-4161 PMID: 16118262 Citations: 116. IF: 5.85(2.97)
27. **Jörnsten, R.** (2004) DDclust: Clustering and Classification based on the L1 data depth. *Journal of Multivariate Analysis Volume 90, Issue 1, July 2004, p. 67-89* Citations: 98. IF: 0.97(1.28)
28. **Jörnsten, R.**, and Yu, B. (2004) Simultaneous clustering and subset selection via MDL. *Advances in Minimum Description Length: Theory and Applications, MIT press. P.Grunwald, IJ Myung, M. Pitt Editors. p295-322.*
29. **Jörnsten, R.**, and Yu, B. (2004) Compressing Genomic and Proteomic Array Images for Statistical Analysis. *Invited book chapter Genomic Signal Processing and Statistics. E.R. Dougherty, I. Shmulevich, J. Chen, Z.J. Wang Editors. p341-366*
30. Pan, J.Z., **Jörnsten, R.**, and Hart, R.P. (2004) Screening anti-inflammatory compounds in injured spinal cord with microarrays: A comparison of bioinformatics analysis approaches. *Physiol. Genomics*, 17:201-214. PMID: 14970362 Citations: 35. IF: 3.99(2.95)

31. Freeman, W., Gaal, G., and **Jornsten, R.** (2003) A neurobiological theory of meaning in perception. Part 3. Multiple cortical areas synchronize without loss of local autonomy. *International Journal of Bifurcation & Chaos*, 13(10), 2845-2856 Citations: 98. IF: 1.12(1.83)
32. **Jörnsten, R.**, and Yu, B. (2003) Simultaneous gene clustering and subset selection for sample classification via MDL. *Bioinformatics*, 2003, 19: 1100-1109. PMID: 12801870 Citations: 89, IF: 6.24(2.97)
33. **Jörnsten, R.**, Yu, B., Wang, W., and Ramachandran, K. (2003) Microarray image compression: SLOCO and the effects of information loss. *EURASIP Signal Processing Journal, Special issue on genomic signal processing*, (2003), 83/4, 859-869 Citations: 46. IF: 1.54(1.65)
34. **Jörnsten, R.**, Vardi, Y., Zhang, C-H., (2002) A Robust Clustering Method and Visualization Tool Based on Data Depth. *Statistical data analysis based on the L1norm and related methods. Y. Dodge editor. p. 353-366* Citations: 29.
35. **Jörnsten, R.**, Vardi, Y., Zhang, C-H., (2002) On the bit-plane compression of Microarray images. *Statistical Data Analysis based on the L1-norm and Related methods. Y. Dodge editor. p415-425* Citations: 13.
36. **Jörnsten, R.**, and Yu, B., (2002) Multiterminal estimation - extensions and a geometric interpretation, Peer-reviewed extended abstract for *IEEE ISIT 2002, Lausanne, p24-29* Citations: 2.
37. **Jornsten, R.**, Yu, B., Wang, W., Ramchandran, K. (2002) Compression of cDNA and inkjet microarray images International Conference on Image Processing (3) 961-964 Citations: 15
38. **Jornsten, R.**, Yu, B. (2002) Compression of cDNA microarray images IEEE Int. Symposium on Biomedical Imaging, 38-41. Citations: 10.
39. **Jornsten, R.**, Yu, B., Wang, W., Ramchandran, K. (2002) Microarray image compression and the effect of compression loss Proc. of the Workshop on Genomic Signal Processing and Statistics, GENSIPS. Citations: 3.
40. **Jornsten, R.**, Yu, B. (2000) Comprestimation: Microarray images in abundance. Conference on Information Sciences and Systems, Princeton, 2000. Citations: 12

SUBMITTED, REVISED MANUSCRIPTS

1. Johansson, P., Schmidh, L., Baskaran, S., Kundu, S., Gallant, C.J., Kling, T., Awe, O., Elfineh, L., Almstedt, E., Haggblad, M., Martens, U., Lundgren, B., Lonnstedt, I., Frigault, M., Hurt, E., **Jörnsten, R.**, Krona, C., Nelander S. (2017) Decoding glioblastoma drug responses using an open access library of patient derived cell models. *Submitted to Cell*
2. Alevronta, E., Skokic, V., Wilderng, U., Dunberger, G., Sjöberg, F., Bull, C., Bergmark, K., **Jörnsten, R.**, Steineck, G. (2017) Dose-response relationships of the sigmoid for urgency syndrome after gynecological radiotherapy. *Revised for Acta Oncologica*
3. Vickhoff, B., **Jörnsten, R.**, Snygg, J., Åström, R., Sommermeyer, D., Nyberg, G., Theorell, T., Nilsson, M. (2017) Musical Empathy. (Kroppens Partitur). Manuscript under revision. *Press appearances: SVT Rapport (Swedish television), P3 (Swedish radio), SvD (newspaper), Radio (SR-P3), Science Festival (Vetenskapsfestivalen 2012), "Forskning och Framsteg" (Swedish popular science journal)*. Submitted to PLoS One.
4. Kallus, J., Sanchez, J., Jauhiainen, A., Nelander, S., **Jörnsten, R.** (2017) ROPE: Network sparsity selection and robust estimation via bootstrap with applications to genomic data.