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# **Key Publications**

#### **Metabolic Engineering**

- S. Ostergaard; L. Olsson; M. Johnston; J. Nielsen (2000) Increasing galactose consumption by Saccharomyces cerevisiae through metabolic engineering of the GAL gene regulatory network. Nature Biotechnol. 18:1283-1286
- K.-K. Hong; W. Vongsangnak; G.N. Vemuri; J. Nielsen (2011) Unravelling evolutionary strategies of yeast for improving galactose utilization through integrated systems level analysis. *Proc. Nat. Acad. Sci. USA* 108:12179-12184
- L. Caspeta; J. Nielsen (2013) Economic and environmental impacts of microbial biodiesel. Nature Biotechnol. 31:789-793
- J.C. Qin; Y.J. Zhou; A. Krivoruchko; M. Huang; L. Liu; S. Khoomrung; V. Siewers; B. Jiang; J. Nielsen (2015) Modular pathway rewiring of *Saccharomyces cerevisiae* enables high-level production of L-ornitine. *Nature Com.* 6:8224
- M. Huang; Y. Bai; S.L. Sjostrom; B.M. Hallström; Z. Liu; D. Petranovic; M. Uhlen; H.N. Joensson; H. Andersson-Svahn; J. Nielsen (2015) Microfluidic screening and whole genome sequencing identifies mutations associated with improved protein secretion by yeast. *Proc. Nat. Acad. Sci. USA* 112:E4689-96
- 6. Y. Zhou; N. A. Buijs; Z. Zhu; J. Qin; V. Siewers; **J. Nielsen** (2016) Production of fatty acid derived oleochemicals and biofuels by synthetic yeast cell factories. *Nature Com.* **7**:11709
- Y. Zhou; N.A. Buijs; Z. Zhu; D.O. Gomez; A. Boonsombuti; V. Siewers; J. Nielsen (2016) Harnessing peroxisomes for production of fatty acid-derived biofuels and chemicals in yeast. J. Am. Chem. Soc. 138:15368-15377
- 8. Z. Zhu; Y.J. Zhou; A. Krivoruchko; M. Grininger; Z.K. Zhao; J. Nielsen (2017) Expanding the product portfolio of fungal type I fatty acid synthases. *Nature Chem. Biol.* 13:360-362
- 9. R. Ferreira; P.G. Teixeira; V. Siewers; J. Nielsen (2018) Redirection of lipid flux towards phospholipids in yeast increases fatty acid turnover and secretion. *Proc. Nat. Acad. Sci. USA* 115:1262-1267
- Z. Dai; M. Huang; Y. Chen; V. Siewers; J. Nielsen (2018) Global rewiring of cellular metabolism renders Saccharomyces cerevisiae Crabtree-negative. Nature Com. 9:3059
- 11. T. Yu; Y. Zhou; M. Huang; Q. Liu; R. Pereira; F. David; J. Nielsen (2018) Reprogramming yeast metabolism from alcoholic fermentation to lipogenesis. *Cell* 174:1-10
- M. Huang; G. Wang; J. Qin; D. Petranovic; J. Nielsen (2018) Engineering the protein secretory pathway of Saccharomyces cerevisiae enables improved protein production. Proc. Nat. Acad. Sci. USA 115:E11025-E11032

#### Systems Biology

- 1. J. Förster; I. Famili; P. Fu; B. Ø. Palsson; **J. Nielsen** (2003) Genome-scale reconstruction of the *Saccharomyces cerevisiae* metabolic network. *Genome Res.* 13:244-253
- I. Borodina; P. Krabben; J. Nielsen (2005) Genome-scale analysis of Streptomyces coelicolor A3(2) metabolism. Genome Res. 15:820-829
- 3. K. R. Patil, **J. Nielsen** (2005) Uncovering transcriptional regulation of metabolism by using metabolic network topology. *Proc. Nat. Acad. Sci.* 102:2685-2689"
- M. R. Andersen; M. L. Nielsen; J. Nielsen (2008) Metabolic model integration of the bibliome, genome, metabolome and reactome of Aspergillus niger. Mol. Systems Biol. 4:178
- 5. M. R. Andersen; W. Vongsangnak; G. Panagiotou; M. P. Salazar; L. Lehmann; J. Nielsen (2008) A trispecies *Aspergillus* microarray: Comparative transcriptomics of three *Aspergillus* species. *Proc. Nat. Acad. Sci.* 105:4387-4392
- R. Agren; L. Liu; S. Shoaie; W. Vongsangnak; I. Nookaew; J. Nielsen (2013) The RAVEN toolbox and its use for generating a genome-scale metabolic model for *Penicillium chrysogenum*. PLoS Comp. Biol. 9:e1002980
- 7. L. Caspeta; Y. Chen; P. Ghiaci; A. Feizi; S. Buskov; B.M. Hallström; D. Petranovic; **J. Nielsen** (2014) Altered sterol composition renders yeast thermotolerant. *Science* 346:75-78
- 8. J.C. Nielsen; S. Grijseels; S. Prigent; B. Ji; J. Dainat; K.F. Nielsen; J.C. Frisvad; M. Workman; **J. Nielsen** (2017) Global analysis of biosynthetic gene clusters reveals vast potential of secondary metabolite production in *Penicillium* species. *Nature Microbiol.* **2**:17044
- P.-J. Lahtvee; B.J. Sanchez; A. Smialowska; S. Kasvandik; I. Elsemman; F. Gatto; J. Nielsen (2017) Absolute quantification of protein and mRNA abundances demonstrate variability in gene-specific translation efficiency in yeast. Cell Systems 4:495-504
- B.J. Sanchez; C. Zhang; A- Nilsson; P.-J. Lahtvee; E. Kerkhoven; J. Nielsen (2017) Improving the phenotype predictions of a yeast genome-scale metabolic model by incorporating enzymatic constraints. *Mol. Systems Biol.* 13:935
- 11. Y. Chen; **J. Nielsen** (2019) Energy metabolism controls phenotypes by protein efficiency and allocation. *Proc. Nat. Acad. Sci. USA*, in press
- 12. H. Lu; F. Li; B.J. Sanchez; Z. Zhu; G. Li; I. Domenzain; S. Marcisauskas; P.M. Anton; D. Lappa; C. Lieven; M.E. Beber; N. Sonnenschein; E.J. Kerkhoven; **J. Nielsen** (2019) A consensus *S. cerevisiae* metabolic model Yeast8 and its ecosystem for comprehensively probing cellular metabolism. *Nature Com.*, in press

#### **Human Metabolism**

- 1. F. H. Karlsson; F. Fåk; I. Nookaew; V. Tremaroli; B. Fagerberg; D. Petranovic; F. Bäckhed\*; **J. Nielsen**\* (2012) Symptomatic atherosclerosis is associated with an altered gut metagenome. *Nature Comm.* 3:1245
- F. Karlsson; V. Tremaroli; I. Nookaew; G. Bergström; C.J. Behre; B. Fagerberg; J. Nielsen\*; F. Bäckhed\* (2013) Gut metagenome in European women with normal, impaired and diabetic glucose control. *Nature* 498:99-103
- 3. A. Mardinoglu; R. Agren; C. Kampf; A. Asplund; I. Nookaew; P. Jacobsen; A.J. Walley; P. Froguel; L.M. Carlsson; M. Uhlen; **J. Nielsen** (2013) Integration of clinical data with a genome-scale metabolic model of the human adipocyte. *Mol. Systems Biol.* 9:649

- 4. F. Gatto; I. Nookaew; J. Nielsen (2014) Chromosome 3p loss of heterozygosity is associated with a unique metabolic network in clear cell renal carcinoma. *Proc. Nat. Acad. Sci.* 111:E866-E875
- A. Mardinoglu; R. Agren; K. Kampf; A. Asplund; M. Uhlen; J. Nielsen (2014) Genome-scale metabolic modeling of hepatocytes reveals serine deficiency in patients with non-alcoholic fatty liver disease. *Nature Comm.* 5:3083
- R. Agren; A. Mardinoglu; C. Kampf; A. Asplund; M. Uhlen; J. Nielsen (2014) Identification of anticancer drugs for hepatocellular carcinoma through personalized genome-scale metabolic modeling. *Mol. Systems Biol.* 10:721
- M. Uhlén, L. Fagerberg, B.M. Hallström, C. Lindskog, P. Oksvold, A. Mardinoglu, Å. Sivertsson, C. Kampf, E. Sjöstedt, A. Asplund, I. Olsson, K. Edlund, E. Lundberg, S. Navani, C.A.-K. Szigyarto, J. Odeberg, D. Djureinovic, J.O. Takanen, S. Hober, T. Alm, H. Berling, H. Tegel, J. Mulder, J. Rockberg, P. Nilsson, J.M. Schwenk, M. Hamsten, K. von Feilitzen, M. Forsberg, L. Persson, F. Johansson, M. Zwahlen, G. von Heijne, J. Nielsen; F. Ponten (2015) Tissue based map of the humane proteome. Science 347:1260419,1-9S
- 8. Shoaie; P. Ghaffari; P. Kovatcheva-Datchary; A. Mardinoglu; P. Sen; E. Pujos-Guillot; T. de Wouters; C. Juste; S. Rizkalla; J. Chilloux; L. Hoyles; J.K. Nicholson; ANR MicroObese Consortium; J. Dore; M.E. Dumas; K. Clement; F. Bäckhed; J. Nielsen (2015) Quantifying diet-induced metabolic changes of the human gut microbiome. *Cell Metabolism* 22:320-331
- 9. A. Mardinoglu; S. Shoaie; M. Bergentall; P. Ghaffari; C. Zhang; E. Larsson; F. Bäckhed; J. Nielsen (2015) The gut microbiome modulates host amino acid and glutathione metabolism in mice. *Mol. Systems Biol.* 11:834
- 10. F. Gatto; I. Nookaew; H. Nilsson; M. Maruzzo; A. Roma; M. E. Johansson; U. Steiner; S. Lundstam; N. Volpi; U. Basso; **J. Nielsen** (2016) Measurements of glycosaminoglycans in plasma and urine for diagnosis of clear cell renal cell carcinoma. *Cell Rep.* 15:1-15
- P. Babaei; S. Shoaei; B. Ji; J. Nielsen (2018) Challenges in modeling the human gut microbiome. *Nature Biotechnol*. 16:682-686

#### Reviews

- S. Ostergaard; L. Olsson; J. Nielsen (2000) Metabolic engineering of Saccharomyces cerevisiae. Microb. Mol. Biol. Rev. 64:34-50
- 2. J. Nielsen (2001) Metabolic engineering. Appl. Microbiol. Biotechnol. 55:263-283
- 3. K.-K. Hong; **J. Nielsen** (2012) Metabolic engineering of *Saccharomyces cerevisiae*: A key cell factory platform for future biorefineries. *Cell. Mol. Life Sci.* **16**:2671-2690
- M. Uhlen; B.M. Hallström; C. Lindskog; A. Mardinoglu; F. Ponten; J. Nielsen (2016) Transcriptomics resources of human tissues and organs. Mol. Sys. Biol. 12:862
- 5. **J. Nielsen**; J. Keasling (2016) Engineering Cellular Metabolism. *Cell* 164:1185-1197
- J. Nielsen (2017) Systems Biology of Metabolism: A Driver for Developing Personalized and Precision Medicine. Cell Met. 25:572-579
- 7. **J. Nielsen** (2017) Systems Biology of Metabolism. Ann. Rev. Biochem. **86**:245-275
- 8. K. Campbell; J. Xia; **J. Nielsen** (2017) The impact of systems biology on bioprocessing. *Trends Biotechnol.* **35**:1156-
- 9. A. Mardinoglu; J. Boren; U. Smith; M. Uhlen; **J. Nielsen** (2018) The employment of systems biology in gastroenterology and hepatology. *Nature Rev. Gastro. Hep.*, in press
- Y. Zhou; E. Kerkhoven; J. Nielsen (2018) Barriers and opportunities in bio-based production of hydrocarbons. *Nature Energy* 3:925-935
- M. Kumar; B. Ji; K. Zengler; J. Nielsen (2019) Modeling approaches for studying the gut microbiota. *Nature Microbiol.* 4:1253-1267

### **Commentaries and Perspectives**

- 1. J. Nielsen (2007) Principles of optimal metabolic network operation. Mol. Sys. Biol. 3:126
- 2. J. Nielsen (2011) Transcriptional control of metabolic fluxes. Mol. Systems Biol. 7:478
- 3. J. Nielsen (2011) Chimeric Synthetic Pathways. Nature Chem. Biol. 7:195-196
- 4. **J. Nielsen**; J. Keasling (2011) Synergies between synthetic biology and metabolic engineering. *Nature Biotechnol.* **29**:693-695
- 5. **J. Nielsen**; M. Fussenegger; J. Keasling; S.Y. Lee; J.C. Liao; K. Prather; B. Palsson (2014) Engineering synergy in biotechnology. *Nature Chem. Biol.* **10**:319-322
- 6. J. Nielsen (2014) Synthetic Biology for Engineering Acetyl Coenzyme A Metabolism in Yeast. mBio 5:e02153-14
- 7. J. Pronk; S.Y. Lee; J. Lievense; J. Pierce; B. Palsson; M. Uhlen; **J. Nielsen** (2015) How to set up collaborations between academia and industrial biotech companies. *Nature Biotechnol.* **33**:237-240
- 8. **J. Nielsen** (2015) Yeast cell factories on the horizon. *Science* **349**:1050-1051
- 9. **J. Nielsen** (2017) Built on stable catalysts. *Nature Microbiol.* **2**:17085
- 10. J. Nielsen (2019) Designer Microbes Serving Society. Cell Met. 29:50
- 11. J. Nielsen (2019) Cell factory engineering for improved production of natural products. Nat. Prod. Rep., in press
- 12. **J. Nielsen** (2019) Antibiotic lethality is impacted by nutrient availabilities: New insights from machine learning. *Cell* **177**:1373-1374
- 13. **J. Nielsen** (2019) A stress-coping strategy for yeast cells. *Nature*, in press

# **Complete List of Publications**

# Research papers in international journals with peer review

#### 1988

 K. Nikolajsen; J. Nielsen; J. Villadsen (1988) In-line flow injection analysis for monitoring lactic acid fermentations. Anal. Chim. Acta 214:137-145

#### 1989

- J. Nielsen; K. Nikolajsen; J. Villadsen (1989) FIA for on-line monitoring of important lactic acid fermentation variables. Biotechnol. Bioeng. 33:1127-1134
- J. Nielsen; C. Emborg; K. Halberg; J. Villadsen (1989) Compartment model concept used in the design of fermentation with recombinant microorganisms *Biotechnol. Bioeng.* 34:478-486

#### 1990

- 4. **J. Nielsen**; K. Nikolajsen; S. Benthin; J. Villadsen (1990) Application of flow-injection analysis in the on-line monitoring of sugars, lactic acid, protein, and biomass during lactic acid fermentations. *Anal. Chim. Acta* 237:165-175
- G. Wehnert; K.-D. Anders; C. Bittner; R. Kammeyer; U. Hübner; J. Nielsen; T. Scheper (1990) Ein kombinierter Fluoreszenz-/Streulichtsensor und dessen Einsatz zur Prozessbeobachtung in der Biotechnologie. Chem.-Ing.-Tech. 62:211-212

#### 1991

- S. Benthin; J. Nielsen; J. Villadsen (1991) A simple and reliable method for the determination of cellular RNA content. *Biotechnol. Techn.*. 5:39-42
- 7. **J. Nielsen**; K. Nikolajsen; J. Villadsen (1991) Structured modelling of a microbial system 1. A theoretical study of the lactic acid fermentation. *Biotechnol. Bioeng.* 38:1-10
- 8. **J. Nielsen**; K. Nikolajsen; J. Villadsen (1991) Structured modelling of a microbial system 2. Experimental verification of a structured lactic acid fermentation model. *Biotechnol. Bioeng.* 38:11-23
- K. Nikolajsen; J. Nielsen; J. Villadsen (1991) Structured modelling of a microbial system 3. Growth on mixed substrates. *Biotechnol. Bioeng.* 38:24-29
- J. Nielsen; A. G. Pedersen; K. Strudsholm; J. Villadsen (1991) Modelling fermentations with recombinant microorganisms: Formulation of a structured model. *Biotechnol. Bioeng.* 37:802-808
- 11. S. Benthin; **J. Nielsen**; J. Villadsen (1991) Characterisation and application of precise and robust flow injection analyzers for on-line measurement during fermentations. *Anal. Chim. Acta* 247:45-50
- 12. L. H. Christensen; J. Nielsen; J. Villadsen (1991) Monitoring of substrates and products during fed-batch penicillin fermentations on complex media. *Anal. Chim. Acta* 249:123-136
- 13. L. H. Christensen; J. Nielsen; J. Villadsen (1991) Delay and dispersion in an in-situ membrane probe for bioreactors. *Chem. Eng. Sci.* 46:3304-3307

#### 1992

- 14. S. Benthin; **J. Nielsen**; J. Villadsen (1992) Flow Injection Analysis of micromolar concentrations of glucose and lactate in fermentation media. *Anal. Chim. Acta* 261:145-153
- S. Benthin; J. Nielsen; J. Villadsen (1992) Anomeric specificity of glucose uptake systems in *Lactococcus cremoris*, *Escherichia coli* and *Saccharomyces cerevisiae*: Mechanisms, kinetics and implications. *Biotechnol. Bioeng.* 40:137-146
- 16. J. Nielsen (1992) On-line monitoring of microbial processes by flow injection analysis. Proc. Control Qual. 2:371-384
- 17. C. L. Johansen; L. H. Christensen; J. Villadsen; J. Nielsen (1992) Monitoring and control of fed-batch penicillin fermentation. *Comp. Chem. Eng.* 16:S297-S304
- 18. K. Strudsholm; J. Nielsen; C. Emborg (1992) Product formation during batch fermentation with recombinant *Escherichia coli* containing a runaway plasmid. *Bioprocess Eng.* 8:173-181

#### 1993

- 19. G. Pedersen; M. Bundgaard; O. Hassager; J. Nielsen; J. Villadsen (1993) Rheological characterization of media containing *Penicillium chrysogenum*. *Biotechnol. Bioeng*. 41:162-164
- 20. **J. Nielsen** (1993) A simple morphologically structured model describing the growth of filamentous microorganisms. *Biotechnol. Bioeng.* 41:715-727
- 21. M. Carlsen; L. H. Christensen; J. Nielsen (1993) Flow-injection analysis for measurement of penicillin V in fermentation samples. *Anal. Chim. Acta* 274:117-123
- M. Carlsen; H. Meier; F. Lantreibecq; C. Johansen; R. W. Min; J. Nielsen (1993) On-line monitoring of penicillin V during penicillin fermentations: A comparison of two different methods based on FIA. Anal. Chim. Acta 279:51-58
- S. Benthin; J. Nielsen; J. Villadsen (1993) Transport of sugars via two anomer-specific sites on mannosephosphotransferase system in *Lactococcus cremoris*: In vivo study of mechanism, kinetics and adaption. *Biotechnol. Bioeng.* 42:440-448
- 24. J. Nielsen (1993) Simulation of bioreactions. Comp. Chem. Eng. 18:S615-S620
- S. Benthin; J. Nielsen; J. Villadsen (1993) Two uptake systems for fructose in *Lactococcus lactis* subsp. *cremoris* FD1 produce glucolytic and gluconeogenic fructose phosphates and induce oscillations of growth and lactic acid formation. *Appl. Environ. Microbiol.* 59:3206-3211

- S. Benthin; J. Nielsen; J. Villadsen (1994) Galactose expulsion during lactose metabolism in *Lactococcus lactis* subsp. cremoris FD1 due to dephosphorylation of intracellular galactose-6-phosphate. Appl. Environ. Microbiol. 60:1254-1259
- 27. A. G. Pedersen; M. Bundgaard-Nielsen; J. Nielsen; J. Villadsen (1994) Characterization of mixing in stirred tank bioreactors equipped with Rushton turbines. *Biotechnol. Bioeng.* 44:1013-1017
- 28. A. G. Pedersen; H. Andersen; J. Nielsen; J. Villadsen (1994) A novel technique based on <sup>85</sup>Kr for quantification of gas-liquid mass transfer in bioreactors. *Chem.Eng. Sci.* 49:803-810
- S. Benthin; U. Schulze; J. Nielsen; J. Villadsen (1994) Growth energetics of Lactococcus cremoris FD1 during energy-, carbon- and nitrogen limitation in steady state and transient cultures. Chem. Eng. Sci. 49:589-610
- 30. L. H. Christensen; G. Mandrup; **J. Nielsen**; J. Villadsen (1994) A robust LC method for studying the penicillin fermentation. *Anal. Chim. Acta* 296:51-62
- 31. L. H. Christensen; J. Nielsen; J. Villadsen (1994) Degradation of penicillin V in fermentation media. *Biotechnol. Bioeng.* 44:165-169
- 32. M. A. Hjortso; **J. Nielsen** (1994) A conceptual model of autonomous oscillations in microbial cultures. *Chem. Eng. Sci.* 49:1083-1095
- 33. J. Nielsen; C. L. Johansen; J. Villadsen (1994) Culture fluorescence measurements during batch and fed-batch cultivations with *Penicillium chrysogenum. J. Biotechnol* 38:51-62
- 34. M. Carlsen; J. Marcher; **J. Nielsen** (1994) An improved FIA-system for measuring α-amylase in cultivation *media*, *Biotechnol. Tech.* 8:479-482

- 35. H. Jørgensen; J. Nielsen; J. Villadsen; H. Mølgaard (1995) Analysis of the penicillin V biosynthesis during fed-batch cultivations with a high yielding strain of *Penicillium chrysogenum*, *Appl. Microbiol. Biotechnol.* 43:123-130
- 36. **J. Nielsen**; P. Krabben (1995) Hyphal growth and fragmentation of *P. chrysogenum* in submerged cultures. *Biotechnol. Bioeng.* 46:588-598
- 37. **J. Nielsen**; C. L. Johansen; M. Jacobsen; P. Krabben; J. Villadsen (1995) Pellet formation and fragmentation in submerged cultures of *Penicillium chrysogenum* and its relation to penicillin production, *Biotechnol. Prog.* 11:93-98
- 38. H. Jørgensen; J. Nielsen; J. Villadsen; H. Mølgaard (1995) Metabolic flux distributions in *Penicillium chrysogenum* during fed-batch cultivations. *Biotechnol. Bioeng.* 46:117-131
- 39. R. Mørkeberg; M. Carlsen; **J. Nielsen** (1995) Induction and repression of α-amylase production in recombinant and wild-type strains of *Aspergillus oryzae*, *Microbiol*. 141:2449-2454
- 40. **J. Nielsen**; H. S. Jørgensen (1995) Metabolic control analysis of the penicillin biosynthetic pathway in a *high yielding strain of Penicillium chrysogenum*, *Biotechnol. Prog.* 11:299-305
- 41. R. Lejeune; J. Nielsen; G. Baron (1995) Morphology of *Trichoderma reesei* QM 9414 in submerged cultures, *Biotechnol. Bioeng.* 47:609-615
- 42. L. H. Christensen; U. Schulze; J. Nielsen; J. Villadsen (1995) Acoustic gas analysis for fast and precise monitoring of bioreactors, *Chem. Eng. Sci.* 50:2101-2110
- 43. R. Lejeune; J. Nielsen; G. Baron (1995) Influence of pH on the morphology of *Trichoderma reesei* QM 9414 in submerged cultures. *Biotechnol. Lett.* 17:341-344
- 44. Rong Wei Min; J. Nielsen; J. Villadsen (1995) Simultaneous monitoring of glucose, lactic acid and penicillin by Sequential Injection Analysis. *Anal. Chim. Acta* 312:149-156
- 45. L. H. Christensen; C. M. Henriksen; J. Nielsen; J. Villadsen; M. Egel-Mitani (1995) Continuous cultivation of *P. chrysogenum*. Growth on glucose and penicillin production. *J. Biotechnol*. 42:95-107
- 46. M. A. Hjortso; **J. Nielsen** (1995) Population balance models of autonomous microbial oscillations. *J. Biotechnol.* 42:255-269
- 47. Rong Wei Min; M. Carlsen; **J. Nielsen**; J. Villadsen (1995) Measurements of α-amylase activity by Sequential Injection Analysis. *Biotechnol. Techn.* 9:765-768

- 48. M. Carlsen; **J. Nielsen**; J. Villadsen (1996) Kinetic studies of acid-inactivation of α-amylase from *Aspergillus oryzae*. *Chem. Eng. Sci.* 51:37-43
- 49. M. Carlsen; A. B. Spohr; J. Nielsen; J. Villadsen (1996) Morphology and physiology of an α-amylase producing strain of *Aspergillus oryzae* during batch cultivations, *Biotechnol. Bioeng.* 49:266-276
- C. M. Henriksen; L. H. Christensen; J. Nielsen; J. Villadsen (1996) Growth energetics and metabolic fluxes in continuous cultures of *Penicillium chrysogenum*, J. Biotechnol. 45:149-164
- 51. L. H. Christensen; J. Marcher; U. Schulze; M. Carlsen; R. W. Min; J. Nielsen; J. Villadsen (1996) Semi-on-line analysis for fast and precise monitoring of bioreaction processes. *Biotechnol. Bioeng.* 52:237-247
- 52. C. M. Henriksen; S. S. Holm; H. S. Jørgensen; **J. Nielsen**; J. Villadsen (1997) Kinetic studies of the carboxylation of 6-amino-penicillanic acid to 8-hydroxy-penillic acid, *Proc. Biochem.* 32:85-91
- 53. M. Carlsen; **J. Nielsen**; J. Villadsen (1996) Growth and α-amylase production of *Aspergillus oryzae* during continuous cultivations. *J. Biotechnol.* 45:81-93
- 54. Rong Wei Min; J. Nielsen; J. Villadsen (1996) On-line monitoring of glucose and penicillin by Sequential Injection Analysis. *Anal. Chim. Acta* 320:199-205
- 55. P. de N. Pissarra; **J. Nielsen**; M. J. Bazin (1996) Pathway kinetics and metabolic control analysis of a high-yielding strain of *Penicillium chrysogenum* during fed-batch cultivations. *Biotechnol. Bioeng.* 51:168-176
- 56. U. Schulze; G. Liden; J. Nielsen; J. Villadsen (1996) Physiological effects of nitrogen starvation in an anaerobic batch culture of *Saccharomyces cerevisiae*. *Microbiology* 142:2299-2310

- 57. **J. Nielsen**; H. S. Jørgensen (1996) Kinetic model for the penicillin biosynthetic pathway in *Penicillium chrysogenum*. *Control Eng. Prac.* 4:765-771
- 58. C. J. L. Klein, L. Olsson, B. Rønnow, J. D. Mikkelsen, **J. Nielsen** (1996) Alleviation of glucose repression on maltose metabolism by *MIG1* disruption in *Saccharomyces cerevisiae*. *Appl. Environ. Microbiol*. 62:4441-4449

- 59. **J. Nielsen** (1997) Metabolic control analysis of biochemical pathways based on a thermokinetic description of reaction rates. *Biochem. J.* 321:133-138
- 60. T. L. Nissen; U. Schulze; J. Nielsen; J. Villadsen (1997) Flux distributions in anaerobic, glucose limited continuous cultures of *Saccharomyces cerevisiae*. *Microbiology* 143:203-218
- 61. K. Schmidt; M. Carlsen; J. Nielsen; J. Villadsen (1997) Modelling isotopmer distributions in biochemical networks Using isotopomer mapping matrices. *Biotechnol. Bioeng.* 55:831-840
- T. C. Zangirolami; C. L. Johansen; J. Nielsen; S. B. Jørgensen (1997) Simulation of penicillin production in fed-batch cultivations using a morphologically structured model. *Biotechnol. Bioeng.* 56:593-604
- 63. P. de N. Pissarra; **J. Nielsen** (1997) Thermodynamics of metabolic pathways for penicillin production: Analysis of thermodynamic feasibility and free energy changes during fed-batch cultivations. *Biotechnol. Prog.* 13:156-165
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- 4. G. Stephanopoulos; A. Aristodou; J. Nielsen (1998) Metabolic Engineering. Academic Press, San Diego
- J. Nielsen (2001) (editor) Metabolic Engineering. Advances in Biochemical Engineering/Biotechnology, Vol. 73, Springer Verlag, Heidelberg
- 6. J. Nielsen; J. Villadsen; G. Liden (2003) Bioreaction Engineering Principles, 2. ed., Kluywer Plenum, New York
- J. Nielsen (2006) (editor) Frontiers in Biotechnology. Advances in Biochemical Engineering/Biotechnology, Vol. 100, Springer Verlag, Heidelberg

- 8. S. G. Villas-Boas; U. Roessner; M. A. E. Hansen; J. Smedsgaard; J. Nielsen (2007) Metabolome Analysis. An Introduction, Wiley. Hoboken
- 9. J. Nielsen; M. C. Jewett (2008) (editors) Metabolomics. Topics in Current Genetics, Vol. 18, Springer Verlag, Heidelberg
- 10. J. Villadsen; J. Nielsen; G. Liden (2011) Bioreaction Engineering Principles, 3. ed., Springer, New York
- 11. J. Nielsen; S. Hohmann (2017) Systems Biology. Advanced Biotechnology, Vol. 5, Wiley VCH, Mannheim

# **Book Chapters**

- 1. **J. Nielsen** (1992) Modelling the growth of filamentous fungi. Adv. Biochem. Eng./Biotechnol. **46**:187-223
- 2. **J. Nielsen**; J. Villadsen (1993) Bioreactors: Description and modelling. pp. 77-104, Chap. 5 in Biotechnology Vol. 3 (2. ed.). Eds. H.-J. Rehm; G. Reed (volume editor G. Stephanopoulos), VCR Verlag
- 3. **J. Nielsen**; M. Carlsen (1996) Fungal Pellets. pp. 273-293, Chap. 13. In: Immobilised living cell systems: Modelling and experimental methods. Eds. G. Baron, R. Willaert; L. De Backer, John Wiley & Sons, Chichester
- 4. P. Krabben; **J. Nielsen** (1998) Modeling the mycelium morphology of *Penicillium* species in submerged cultures. Adv. Biochem. Eng./Biotechnol. **60**:125-152
- 5. A. B. Spohr, T. Agger; M. Carlsen; **J. Nielsen** (1998) Quantitative morphology of filamentous microorganisms. pp. 373-410, Chap. 14. In: Digital analysis of Microbes. Eds. M. H. F. Wilkinson; F. Schut, John Wiley & Sons
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- 7. **J. Nielsen** (1999) Fermentation kinetics. pp. 69-119, Chap. 4. In: Modern Concepts in Fermentation Biotechnology. Eds. M. El-Mansi, Bryce, Taylor and Francis, London
- B. Christensen; J. Nielsen (1999) Metabolic network analysis powerful tool in metabolic engineering. Adv. Biochem. Eng./Biotechnol. 66:209-231
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- T. Agger; J. Nielsen (2001) Mathematical modelling of microbial processes Motivation and means. pp. 61-75. In: Engineering and Manufacturing for Biotechnology. Eds. M. Hofman, P. Thonart, Kluwer Academic Publishers, Dordrecht
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- 14. **J. Nielsen** (2002) Metabolic Engineering. pp. 391-406. In: Encyclopedia of Physical Science and Technology, Vol. 9. Academic Press, San Diego
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- A. Gombert; J. Nielsen (2003) Quantification of metabolic fluxes. In: Encyclopaedia of Life Sciences. Nature Publishing Group, London (<u>www.els.net</u>
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- H. David, J. Nielsen (2005) Modelling of fungal metabolism. Pp. 195-214. In: Metabolome Analysis. Strategies for Systems Biology. Ed. S. Vaidyanathan, G. G. Harrigan, R. Goodacre, Springer, New York
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- 41. J. Maury; M. Asadollahi; R. L. Formenti; M. Schalk; **J. Nielsen** (2013) Metabolic engineering of isoprenoid production: Reconstruction of multi step heterologous pathways in tractable hosts. Chap. 6. In Isoprenoid synthesis in plants and microorganisms. Eds. T. J. Bach and M. Rohmer, Springer, Germany
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- 43. R. Kumar; P.-J. Lahtvee; **J. Nielsen** (2014) Systems Biology: Developments and Applications. Chap. 4. In Molecular Mechanisms in Yeast Carbon Metabolism. Eds. Jure Piskur and Concetta Compagno, Springer, Berlin, Germany
- 44. **J. Nielsen**; S. Bordel; I. Nookaew (2014) Genome-scale metabolic models: A link between bioinformatics and systems biology. Chap. 6.11. Pp. 165-173. In Comprehensive Biomedical Physics. Ed. A. Brahme, Elsevier, Amsterdam, The Netherlands
- 45. Y. Chen; Y.J. Zhou; V. Siewers; J. Nielsen (2015) Enabling technologies to advance microbial isoprenoid production. *Adv. Biochem. Eng./Biotechnol.* 148:143-160
- 46. J. Kim; J. Nielsen (2017) Bioproduction of Fuels: An Introduction. Pp. 1-22. In Handbook of hydrocarbons and lipid microbiology series. Consequences of microbial interactions with hydrocarbons, oils and lipids. Ed. S. Y. Lee
- M. Huang; H. Joensson J. Nielsen (2017) High-throughput microfluidics for screening of yeast libraries. Pp. 307-317.
   In Synthetic Metabolic Pathways. Methods and Protocols; Methods in Molecular Biology. Eds. M.K. Jensen and J.D. Keasling.
- 48. Q. Liu; T. Yu; K. Campbell; **J. Nielsen**; Y. Chen (2018) Modular pathway rewiring of yeast for amino acid production. Meth. Enz., in press

# **Papers in Conference Proceedings**

- 1. **J. Nielsen**; K. Nikolajsen; J. Villadsen (1989) Computer controlled system for on-line monitoring of a fermentation process. pp. 53-57. In Computer Applications in Fermentation Technology. Modelling and Control of Biotechnological Processes, eds. N. M. Fish; R. I. Fox; N. F. Thornhill, Elsevier Applied Science, London
- J. Villadsen; J. Nielsen (1990) Modelling of fermentation kinetics. pp. 259-266. Proc. V'th European Congress on Biotechnology, Lyngby
- J. Nielsen (1991) Application of structured fermentation models. pp. 843-848. Proc. European Simulation Multiconference, Copenhagen
- 4. S. Benthin; **J. Nielsen**; J. Villadsen (1992) Transmembrane transport systems, studied on actively growing cells. pp. 351-355. In Harnessing Biotechnology for the 21st Century (Proc. IX'th International Biotechnology Symposium, Crystal City), eds. M. R. Ladisch; A. Rose,

- J. Nielsen (1993) Modelling of filamentous microorganisms. pp. 45-52. In Computer Applications in Fermentation Technology. Modelling and Control of Biotechnological Processes, eds. M. N. Karim; G. Stephanopoulos, Pergamon Press
- H. S. Jørgensen; H. Møllgaard; J. Nielsen; J. Villadsen (1993) Identification of rate controlling enzymes in the metabolic pathway of penicillin in a high yielding strain of *P. chrysogenum*. pp. 251-254. In Computer Applications in Fermentation Technology. Modelling and Control of Biotechnological Processes, eds. M. N. Karim; G. Stephanopoulos, Pergamon Press
- 7. **J. Nielsen** (1993) Modelling the morphology of filamentous fungi. pp. 131-142. Proc. Bioreactor Performance, eds. U. Mortensen; H. J. Noorman, Elsingore
- 8. S. Frandsen; J. Nielsen; J. Villadsen (1993) Application of regimen analysis of yeast fermentation for down-scaling. pp. 171-179. Proc. Bioreactor Performance, eds. U. Mortensen; H. J. Noorman, Elsingore
- 9. S. Frandsen; **J. Nielsen**; J. Villadsen (1993) Dynamics of *Saccharomyces cerevisiae* in continuous culture. pp. 887-890. In Progress in Biotechnology, Vol. 9. Proc. VI'th European Congress on Biotechnology, Florence. Elsevier
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   In Progress in Biotechnology, Vol. 9. Proc. VI'th European Congress on Biotechnology, Florence. Elsevier
- J. Nielsen (1994) Physiological Engineering Towards a new science. pp. 30-38. In Proc. The 1994 IChemE Research Event, London, Vol. I
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- 13. **J. Nielsen** (1994) Physiological aspects of *Penicillium chrysogenum*. pp. 15-18. Proc. Modelling of filamentousfungi, Otocek.
- 14. G. Lidén; U. Schulze; J. Nielsen; J. Villadsen (1995) On the optimization of ethanol production in nitrogen limited yeast fermentations. In Proc. VII'th European Congress on Biotechnology, Nice
- 15. **J. Nielsen**; H. Jørgensen (1995) A kinetic model for the penicillin biosynthetic pathway in *Penicillium chrysogenum*. pp. 136-141. In Proc. Computer Application in Biotechnology 6, Garmisch-Partenkirchen
- P. N. Pissarra; M. J. Bazin; K. Schmidt; J. Nielsen (1995) A user-friendly and interactive methodology for simulation and non-linear parameter estimation of biotechnological process models using SIMULINK. Proc. Nordic Matlab Conference '95, Stockholm
- 17. K. Schmidt: P. N. Pissarra; J. Nielsen (1995) The evolutionary strategy: A simple and straightforward optimization algorithm for parameter estimation in structured biochemical models. Proc. Nordic Matlab Conference '95, Stockholm
- J. Nielsen (1995) Metabolic control analysis of the penicillin biosynthetic pathway. Proc. National Biotechnology and Bioengineering Conference, Ixtapa, Mexico
- 19. U. Schulze; T. L. Nissen; J. Nielsen; J. Villadsen (1996) Application of Metabolic Flux Analysis in physiological studies. Proc. V'th World Congress on Chemical Engineering, San Diego, USA
- P. de N. Pissarra; J. Nielsen (1996) Kinetic and thermodynamic analysis of the penicillin biosynthetic pathway. Proc. V'th World Congress on Chemical Engineering, San Diego, USA
- 21. D. L. Bogle et al. (1996) Process synthesis, design and simulation of integrated biochemical processes. Proc. V'th World Congress on Chemical Engineering, San Diego, USA
- 22. J. Nielsen; I. Spencer Martins (1997) Metabolic Engineering. Proc. European Cell Factory Conference, Lund, Sweden
- 23. S. Østergaard; L. Olsson; **J. Nielsen** (1998) Metabolic control analysis of the Leloir pathway in *Saccharomyces cerevisiae*. BioThermoKinetics in the post genomic era. Proc. 8'th BTK Meeting, Fiskebäckskil, Sweden
- 24. H. Aae Theilgaard; **J. Nielsen** (1998) The influence of the LLD-ACV:bisACV ration on a MCA of the penicillin biosynthetic pathway in *Penicillium chrysogenum*. BioThermoKinetics in the post genomic era. Proc. 8'th BTK Meeting, Fiskebäckskil, Sweden
- 25. **J. Nielsen** (1998) Mathematical modelling of biochemical pathways. BioThermoKinetics in the post genomic era. Proc. 8'th BTK Meeting, Fiskebäckskil, Sweden

### **Other Publications**

- 1. **J. Nielsen** (1990) Post doc på Universität Hannover. Dansk Kemi **5**:178-179
- 2. J. Nielsen (1990) On-line måling af biomasse i bioreaktorer. Dansk Kemi 8:260-265
- 3. **J. Nielsen**; J. Gram; L. Foldager (1990) Bioreaktionsteknik: Kendte metoder anvendt på nye processer. Dansk Kemi 12:430-431
- 4. J. Nielsen (1993) Physiological Engineering. Dansk Kemi 11:14-17
- J. Nielsen; A. G. Pedersen; M. Bundgaard-Nielsen; H. Andersen (1994) Anvendelse af radioaktive isotoper til karakterisering af bioreaktorer. Dansk Kemi 4:28-31
- 6. J. Nielsen (1995) Doktorafhandling om industriel penicillinproduktion. Dansk Kemi 11:20-23
- 7. **J. Nielsen** (1995) Penicillinets historie. Dansk Kemi **12**:24-28
- 8. U. Schulze; J. Nielsen (1997) Massachusetts Institute of Technology. Dansk Kemi
- 9. T. Agger; J. Nielsen (1999) Optimering af enzymproduktion med skimmelsvampe. Dansk Kemi 1:14-15
- B. Christensen; J. Nielsen (1999) Metabolsk flux analyse en kvantitativ beskrivelse af mikroorganismers primære metabolisme. Dansk Kemi 1:16-18
- 11. **J. Nielsen** (1999) Functional genomics og dens rolle i udviklingen af fremtidige bioteknologiske processer. Dansk Kemi 1:20-27
- 12. C. Bro; B. Regenberg; J. Nielsen (2001) DNA Arrays. Dansk Kemi 1:18-20
- 13. M. R. Andersen; M. L. Nielsen; J. Nielsen (2006) Genomet systembiologiens rygrad. Dansk Kemi 3:15-17

- 14. J. Højer-Pedersen; J. Smedsgaard; **J. Nielsen** (2006) Metabolomet: Et indirekte produkt af genomet. Dansk Kemi **3**:18-20
- 15. F. Gatto; **J. Nielsen** (2014) Särskild metabolism i klarcellig njurcellscancer. Onkologi i Sverige **3**:76-80
- 16. A.W. Lykke; B. Palsson; **J. Nielsen** (2017) Why microbes rule the world and our industries. BioZoom **2**:4-5
- 17. B. Palsson; **J. Nielsen** (2017) Biobased production of chemicals A transformation of a USD3T industry. BioZoom **2**:6-9

### List of Presentations

# **Invited conference presentations**

- 1. Modelling of fermentation kinetics, European Congress on Biotechnology 5, Lyngby (1990)
- 2. Modelling of the lactic acid fermentation, European Congress on Biotechnology 5, Lyngby (1990)
- 3. Modelling of fermentation processes, European Simulation Multiconference, Copenhagen (1991)
- 4. On-line monitoring of microbial processes, FACSS, Anaheim, California (1991)
- 5. Modelling the growth of filamentous microorganisms, IFAC/ICCAFT, Keystone, Colorado (1992)
- On-line monitoring of fermentation processes, Bioreactor Performance, Annual Conference of a Nordic Industrial programme, Stockholm, Sweden (1992)
- 7. On-line måling af bioprocesser, 2. Danske Symposium i Analytisk Kemi, Lyngby, Denmark (1992)
- 8. On-line monitoring of penicillin fermentations, AnaBiotec'92, Noordwijkerhout, Holland (1992)
- 9. Modelling the morphology of filamentous fungi, Bioreactor Performance, Elsingore, Denmark (1993)
- 10. Simulation of bioreactions, ESCAPE-3, Graz, Austria (1993)
- Pellet formation, Process Integration in Biochemical Engineering, European Science Foundation Workshop, Sitges, Spain (1993)
- 12. Physiological Engineering Towards a new science. The 1994 IChemE Research Event, London (1994)
- 13. Modelling the growth and product formation of Penicillium chrysogenum, IUMS Congresses '94, Prague (1994)
- 14. Mathematical models: An excellent tool in physiological studies of filamentous fungi, International conference on Modelling of filamentous fungi, Otocek, Slovenien (1994)
- 15. In-situ and on-line analysis of cultivation processes, International seminar on Analyses in biomass conversion to ethanol, Lund, Sweden (1994)
- 16. A kinetic model for the penicillin biosynthetic pathway in Penicillium chrysogenum, 6'th International conference on Computer Application in Biotechnology, Garmisch-Partenkirchen, Germany (1995)
- 17. Modelling the growth of filamentous fungi, National Biotechnology and Bioengineering Conference, Ixtapa, Mexico (1995)
- 18. Metabolic Control Analysis of the penicillin biosynthetic pathway, National Biotechnology and Bioengineering Conference, Ixtapa, Mexico (1995)
- 19. Metabolic Control Analysis of the penicillin biosynthetic pathway, Pacifichem'95, Honolulu, USA (1995)
- Fungal Morphology. Measurements and modelling, 6th Netherlands Biotechnology Congress, Amsterdam, The Netherlands (1996)
- 21. Metabolic Flux Analysis of filamentous fungi, DECHEMA Jahrestagungen'96, Wiesbaden, Germany (1996)
- 22. Metabolic Engineering: The analysis part, rDNA Biotechnology: Focus on Metabolic Engineering, Engineering Foundation, Danvers, USA (1996)
- 23. What can we learn from metabolic flux analysis? VW-symposium on Metabolic fluxes, Hannover, Germany (1997)
- 24. Metabolic engineering, Danish Biotechnology Conference III, Vejle, Denmark (1997)
- 25. Metabolic control analysis of the penicillin biosynthetic pathway based on a kinetic model and on a thermokinetic description of reaction rates, ESF Conference on Control of Metabolic Flux, Giens, France (1997)
- 26. Physiological Engineering, European Congress on Biotechnology 8, Budapest, Hungary (1997)
- 27. Mathematical modelling of biochemical pathways, 8'th BTK meeting, Fiskebäckskil, Sweden (1998)
- 28. Enzyme production by Aspergillus, SGM meeting, Norwich, UK (1998)
- 29. Metabolic engineering of *Saccharomyces cerevisiae* for the improvement of industrial processes, Yeast as a cell factory, Vlaardingen, The Netherlands (1998)
- The role of mathematical models in kinetic studies of hyphal growth, Analysis of microbial cells at the single cell level, Como, Italy (1999)
- 31. The role of mathematical models in microbial physiology, Annual Meeting of Swedish Society of Microbiology, Lund, Sweden (1999)
- 32. Modeling of cellular processes, European Congress on Biotechnology 9, Brussels, Belgium (1999)
- 33. The application of mathematical models in molecular physiology, European Congress on Biotechnology 9, Brussels, Belgium (1999)
- 34. Metabolic engineering of *Saccharomyces cerevisiae* for the improvement of ethanol production, IEA Bioenergy Workshop, Itala Game Reserve, South Africa (1999)
- 35. Yeast mixed sugar metabolism, Cell Factory Area. Grand Finale, Graz, Austria (1999)
- 36. The role of metabolic engineering in the improvement of industrial processes, APBioChEC'99, Phuket, Thailand (1999)
- 37. Transgenic microorganisms and industrial strain enhancement, Perspectives and limitations of biotechnology in developing countries, San José, Costa Rica (2000)
- 38. Metabolic engineering of enzyme production by filamentous fungi, 4<sup>th</sup> International Congress on Biochemical Engineering, Stuttgart, Germany (2000)
- 39. Metabolic Engineering of Saccharomyces cerevisiae, XIII SINAFERM, Teresopolis, Brasilien (2000)
- 40. Metabolome analysis: A powerful tool in metabolic engineering and functional genomics, Metabolic Engineering III, Colorado Springs, USA (2000)
- 41. Metabolome analysis: A powerful tool in functional genomics, WFCS Symposium on Genomics, Wageningen, The Netherlands (2000)

- 42. Genome wide expression monitoring of metabolically engineered strains of *S. cerevisiae* with improved ethanol yield, PacificChem2000, Honolulu, USA (2000)
- 43. Metabolome analysis: A powerful tool in metabolic engineering and functional genomics, MTBio Workshop, Dresden, Germany (2001)
- 44. The role of functional genomics in metabolic engineering, SIM Annual Meeting, St. Louis, USA (2001)
- 45. Metabolic engineering for improved β-lactam production, Recent Advances in Fermentation Technology IV, Long Beach, USA (2001)
- 46. The role of yeast in modern biotechnology, International Specialized Symposium on Yeast 2002, Pilansberg, South Africa (2002)
- 47. Metabolic engineering and functional genomics: Moving towards systems biology, SGM Annual Meeting, Warwick, UK (2002)
- 48. Impact of Systems Biology on Modern Biotechnology, Danish Biotechnology Conference VIII, Vejle, Denmark (2002)
- 49. Metabolic engineering for improvement of β-lactam production, Genetics of Industrial Microorganisms 2002, South Korea (2002)
- 50. Carbon metabolism in Aspergillus and Penicillium, International Mycology Congress 7, Oslo, Norway (2002)
- 51. From the Genome to the Fluxome: A Metabolic Engineering challenge, ASM Annual Meeting, Washington DC, USA (2003)
- 52. Systems Biology of glucose repression in *S. cerevisiae*, Yeast Genetics and Molecular Biology, Gothenburg, Sweden (2003)
- 53. From Genomics to Industrial Bioprocesses: A Metabolic Engineering challenge, European Congress on Biotechnology 11, Basel, Switzerland (2003)
- 54. Systems Biology of S. cerevisiae, First International Workshop on Yeast Systems Biology, St. Louis, USA (2003)
- 55. From Glucose to Antibiotics what controls the flux, Ernst Schering Foundation Research Workshop, Berlin, Germany (2004)
- 56. Systems Biology of S. cerevisiae, South Africa Microbial Society's annual meeting, Stellenbosch, South Africa (2004)
- 57. Aspergillus the Ultimate Cell Factory for Production of Chemicals, European Congress on Fungal Genetics 7, Copenhagen, Denmark (2004)
- 58. Microorganisms the Chemical Factories of the Future, ETIF Conference, Lund, Sweden (2004)
- 59. Grøn Kemi, Konference om Ansvarlig Bioteknologi, Copenhagen, Denmark (2004)
- 60. Integration of Metabolic Models and Ome Data: Lessons from S. cerevisiae, ASM Conference on Integration of Metabolism and Genomics, Montreal, Canada (2004)
- 61. Green Chemistry the New S-curve in Biotechnology, 35<sup>th</sup> R<sup>3</sup> Nordic Symposium and Exibition, Elsingore, Denmark (2004)
- 62. Metabolic Engineering, European Symposium on Biochemical Engineering Science 5, Stuttgart, Germany (2004)
- 63. Metabolic Engineering: Impacts of Functional Genomics, Metabolic Engineering V, Lake Tahoe, USA (2004)
- 64. From gene expression to metabolic fluxes, International Congress on Systems Biology 2004, Heidelberg, Germany (2004)
- 65. Integration of the metabolism of *S. coelicolor* through genome-scale modelling, Streptomyces Dissemination Meeting, University of Surrey, UK (2005)
- 66. Design af cellefabrikker til production af nye levnedsmiddelingredienser, LMC Congress, Lyngby, Denmark (2005)
- 67. White Biotechnology: From gene expression to metabolic fluxes, DECHEMA Bioperspectives, Wiesbaden, Germany (2005)
- 68. Identification of global regulatory structures in cellular metabolism, Biochemical Engineering XIV, Harrison Hot Springs, Canada (2005)
- 69. Genome-scale models of fungi, 13th International Meeting on Microbial Genomes (2005)
- 70. The role of chemical engineering in modern biotechnology, CHEMPOR 2005, Braga, Portugal (2005)
- 71. Systems biology of the yeast *Saccharomyces cerevisiae*, The Norwegian Biochemical Society, 42. Contact Meeting, Storefjell, Norway (2006)
- 72. Model driven data integration in yeast systems biology, Genomes to Systems Conference 2006, Manchester, UK (2006)
- 73. Systems Biology of Industrial Microbes, American Society for Microbiology 106<sup>th</sup> General Meeting, Orlando, USA (2006)
- Impacts of systems biology on industrial biotechnology, Danish Conference on Molecular Biology and Biotechnology, Munkebjerg, Denmark (2006)
- 75. Reporter features: A tool for mapping of global control in metabolism through model driven analysis of ome data, ISSY25 Systems Biology of Yeasts from Models to Applications, Helsinki, Finland (2006)
- 76. Yeast as a versatile cell factory, Genetics of Industrial Microorganisms, Prague, Czech Republic (2006)
- 77. Metabolism of *Aspergillus*: Lessons from Genomics, Society for Industrial Microbiology Annual Meeting, Baltimore, USA (2006)
- 78. Production of engineered haemoglobin from yeast, International Visions on Blood Substitutes, Parma, Italy (2006)
- 79. Systems biology of lipid metabolism in Saccharomyces cerevisiae: Mapping of global regulatory structures, Keystone conference on Bioactive Lipids, Taos, New Mexico, USA (2007)
- 80. Yeast as a versatile chemical factory, ASM Annual Meeting, Toronto, Canada (2007)
- 81. Integrated analysis of yeast metabolism, ASM Annual Meeting, Toronto, Canada (2007)
- 82. Systems biology of the cell factory Aspergillus niger, International Conference on Biorefinery, Beijing, China (2007)
- 83. The role of chemical engineering in modern biotechnology, European Congress on Chemical Engineering 6, Copenhagen, Denmark (2007)
- 84. Integrated analysis of yeast metabolism, FOSBE2007, Stuttgart, Germany (2007)

- 85. Integrated analysis of yeast metabolism, 9th Functional Genomics Conference: Synthetic Biology, Gothenburg, Sweden
- 86. Systems biology of the cell factory Aspergillus niger, RAFT VII, St. Petersburg, Florida, USA (2007)
- 87. Systems Biology as a driver for industrial biotechnology, 2008 BERN meeting, University College London, UK (2008)
- 88. Comparative metabolic analysis of Aspergilli at the genome level, European Conference on Fungal Genetics 9, Edinburgh, UK (2008)
- 89. The role of Snf1/AMPK on regulation of lipid metabolism: Lessons from yeast, Danish Conference on Molecular Biology and Biotechnology II, Munkebjerg, Denmark (2008)
- 90. Modeling of microbial metabolic networks, Tutzing Symposium 2008, Tutzing, Germany (2008)
- 91. Systems Biology of the cell factories A. niger and A. oryzae, FEBS2008, Athens, Greece (2008)
- 92. Systems Biology of the yeast *Saccharomyces cerevisiae*, International Congress on Genetics 2008, Berlin, Germany (2008)
- 93. Systems Biology of lipid and energy metabolism in yeast, International Conference on Yeast, Kiev, Ukraine (2008)
- 94. Industrial systems biology: Yeast and Aspergilli as cell factories for sustainable production of chemicals, International Conference on Systems Biology 2008, Gothenburg, Sweden (2008)
- 95. Production of fine chemicals by yeast and Aspergilli, International Biotechnology Symposium 2008, Dalian, China (2008)
- Integrated analysis of yeast metabolism, 61<sup>st</sup> Annual Symposium on Cancer Research: Systems Biology of Cancer, Houston, USA (2008)
- 97. The metabolic networks of Aspergillii, Asperfest, Asilomar, USA (2009)
- 98. Metabolism of Aspergilli at the genome level, 25th Fungal Genetics Conference, Asilomar, USA (2009)
- 99. Systems biology of lipid metabolism: Mapping of global regulatory structures, 9<sup>th</sup> Yeast Lipid Conference, Berlin, Germany (2009)
- 100. Integrated analysis of metabolism; From yeast to human, Nobel Symposium on Systems Biology, Stockholm, Sweden (2009)
- 101. Industrial Systems Biology: Identification of metabolic engineering targets using metabolic networks, Foundation of Engineering in Systems Biology 2009, Denver, USA (2009)
- 102. From omics data to phenotype through integrative systems biology, ISSY 27, Paris, France (2009)
- 103. Systems biology of metabolism: From yeast to mammals, European Congress on Biotechnology 14, Barcelona, Spain (2009)
- 104. Yeast Metabolomics, Metabolomics Conference, University of Copenhagen, Copenhagen, Denmark (2009)
- 105. Prospects of Systems Biology for advancing our understanding of global regulation of metabolism, Annual INRA Conference, Genoscope, France (2010)
- 106. Genome-Scale Modeling of Fungi: Expansion from Metabolism to Protein Production, PYFF4, Rotterdam, The Netherlands (2010)
- 107. Yeast as a Platform Cell Factory for the Production of Fuels and Chemicals, MEVIII, Jeju Island, South Korea (2010)
- 108. Metabolism of Filamentous Fungi at the Genome Level, FEBS2010, Gothenburg, Sweden (2010)
- 109. Insight into Metabolic Diseases through Systems Biology, 8th Aegian Conference on Pathways, Networks and Systems, Rhodes, Greece (2010)
- 110. Genome-Scale Metabolic Models: The Core of Industrial Systems Biology, Industrial Systems Biology 2010, Gothenburg, Sweden (2010)
- 111. Yeast as a platform cell factory for production of fuels and chemicals. International Biotechnology Symposium 2010, Rimini, Italy (2010)
- 112. Yeast as a platform cell factory. Power of Microbes in Industry and Environment 2010, Island Krk, Croatia (2010)
- 113. The application of genome-scale metabolic models in industrial biotechnology, ICSB2010, Edinburgh, UK (2010)
- 114. Synthetic biology and industrial biotechnology, Green Chem Conference, Lund, Sweden (2010)
- 115. Development of yeast as a platform cell factory, 3<sup>rd</sup> International Conference on Biomolecular Engineering, San Fransisco, USA (2011)
- 116. Engineering of the Biocatalyst in Biorefineries, 3<sup>rd</sup> International Symposium for Innovation Bioproduction Kobe, Kobe, Japan (2011)
- 117. The Art of Making Yeast to Produce Biodiesel, Chalmers Energy Conference 2011, Gothenburg, Sweden (2011)
- 118. Yeast as Platform Cell Factories in Future Biorefineries, AAAS Annual Symposium 2011, Washington, USA (2011)
- 119. Yeast as Platform Cell Factories in Future Biorefineries, Asian Congress on Biotechnologyn 2011, Shanghai, China (2011)
- 120. Nutritional Systems Biology, Experimental Biology 2011, Washington, USA (2011)
- 121. Yeast as Platform Cell Factories in Future Biorefineries, Danish Conference on Biotechnology 6, Munkebjerg, Denmark (2011)
- 122. Towards the Human Metabolic Atlas, 8th Key Symposium, Stockholm, Sweden (2011)
- 123. Application of Genome Scale Metabolic Models in Industrial Biotechnology, 1st COBRA Conference, Reykavik, Iceland (2011)
- 124. Metabolic Engineering, Synthetic Biology, Systems Biology, ... what is the role of Biochemical Engineering, Biochemical and Biomolecular Engineering XVII, Seattle, USA (2011)
- 125. Integration of Metabolomics Data into Metabolic Networks, Metabomeeting 2011, Helsinki, Finland (2011)
- 126. Gut Metagenomics and its relation to Systems Medicine, Science for Life Laboratory Annual Conference 2012, Uppsala, Sweden (2012)
- 127. Synthetic Biology and Metabolic Engineering of Yeast, EFB Applied Synthetic Biology in Europe, Barcelona, Spain (2012)
- 128. Yeast as a Platform Cell Factory for Biorefineries, APCChE2012, Singapore (2012)
- 129. Prospects for systems biology and modelling of the gut microbiome, MetaHit, Paris, France (2012)

- 130. Systems Biology of Metabolism: Impact of Human Health and Industrial Biotechnology, Molecular Frontiers Symposium, Singapore (2012)
- 131. Systems biology of industrially important filamentous fungi, 11th European Congress on Fungal Genetics, Marburg, Germany (2012)
- 132. Modeling and Engineering of Protein Secretion by Yeast, Microbial Stress: From Molecules to Systems, Belgirate, Italy (2012)
- 133. Systems Biology of Metabolism: Enabling Technologies for Metabolic Engineering of Yeast, Metabolic Engineering IX, Biarritz, France (2012)
- 134. Genome-Scale Metabolic Models: A Bridge Between Bioinformatics and Systems Biology, Nordic Bioinformatics Conference, Stockholm (2012)
- 135. Towards a Human Metabolic Atlas, Nordic Clinical Chemistry Conference, Reykavic, Iceland (2012)
- 136. Genome-Scale Metabolic Models: A Bridge Between Bioinformatics and Systems Biology, ICSB2012, Toronto, Canada (2012)
- 137. Systems Biology of *Saccharomyces cerevisiae* Metabolism: Impact on Cell Factory Design, ICY2012, Madison, USA, 2012.
- 138. Systems Biology and its Application in Nutritional Studies, IVA Symposium "Mat som Medicin", Gothenburg, Sweden (2012)
- 139. The Sense of Biofuels, IVA Symposium "Technologies for the Future Visions and Opportunities", Stockholm, Sweden (2012)
- 140. Yeast as a Platform Cell Factory in Future Biorefineries, 4th International Conference on Biomolecular Engineering, Fort Lauderdale, USA (2013)
- 141. Systems Biology: Yeast as a platform cell factory, Annual B-Basic Conference, Nordweijkerhout, The Netherlands (2013)
- 142. Yeast as a platform cell factory in future biorefineries, Copenhagen Bioscience Conference on Biosustainability, Hillerød, Denmark
- 143. Advancing metabolic engineering of fungal cell factories through systems biology, PYFF5, Montpeiller, France (2013)
- 144. Developing yeast cell factories for sustainable production of chemicals, Biochemical and Molecular Engineering XVIII, Beijing, China (2013)
- 145. Role of Systems and Synthetic Biology in Metabolic Engineering, Tsinghua Mini-Symposium on Synthetic Biology, Beijing, China (2013)
- 146. Yeast as a platform cell factory in future biorefineries, Genetics of Industrial Microorganisms 2013, Cancun, Mexico (2013)
- 147. Engineering of yeast cell factories for the production of advanced biofuels, Genetics of Industrial Microorganisms 2013, Cancun, Mexico (2013)
- 148. From metagenomics to systems biology of the gut ecosystem, Metagenopolis Conference 2013, Jouy-en-Josas, France (2013)
- 149. Genome scale modelling for unravelling the mechanisms of cancer, Chalmers Conference on Life Science Engineering, Gothenburg, Sweden (2013)
- 150. Regulation of the yeast metabolome, ICSB2013, Copenhagen, Denmark (2013)
- 151. Engineering of yeast cell factories for production of advanced biofuels, Lignofuels 2013, London, UK (2013)
- 152. Metabolic engineering of yeast for production of fuels and chemicals, Industrial Biotechnology: Meeting the challenges, Lund, Sweden (2013)
- 153. Use of genome-scale metabolic models for integrative analysis, SILS Conference, Öresundsbro, Sweden (2013)
- 154. Systems Biology: From microbe to man. Putting microbial genomes to work, Delft, The Netherlands (2013)
- 155. Yeast as a platform cell factory for production of fuels and chemicals. AMBC2014, Bangkok, Thailand (2014)
- 156. Systems biology for identification of novel metabolic engineering targets. Metabolic Engineering X, Vancouver, Canada (2014) (also available on-line at <a href="https://www.aiche.org/sbe/">www.aiche.org/sbe/</a>)
- 157. Systems biology and metabolic engineering of yeast. IUMS2014, Montreal, Canada (2014)
- 158. Genome wide reprogramming of human metabolism to obesity and cancer. International Summer Symposium on Systems Biology, INMEGEN, Mexico City, Mexico (2014)
- 159. Combining systems biology and adaptive laboratory evolution for mapping genotype-phenotype relaionsships in yeast. Frontiers in Fungal Systems Biology, EMB, Heidelberg, Germany (2014)
- 160. Studies of metabolic diseases and cancer through genome-scale metabolic modelling of human metabolism, Cell Symposia: Systems Approach to Metabolic Diseases, Chicago, USA (2014)
- 161. Aquiring novel phenotypes of yeast through adaptive laboratory evolution, ISSY31, Nova Gorcia, Slovenia (2014)
- 162. Impacts of systems biology on synthetic biology of yeast, International Symposium on Synthetic Biology, Beijing, China (2014)
- 163. Integrative analysis of lipid metabolism through genome-scale metabolic modelling, Keystone Symposium on Systems Biology of Lipid Metabolism, Breckenridge, USA (2015)
- 164. New insights into cancer and obesity related diseases through systems biology of human metabolism, Systems Biology: Networks, Cold Spring Harbor Laboratory, Cold Spring Harbor, USA (2015)
- 165. Identifying genome-level metabolic reprogremming in cancer cells, DFG Hinterzartener Kreis für Krebsforschung, Lago de Como, Italy (2015)
- 166. Yeast as a platform cell factory for production of fatty acid derived products, Copenhagen Bioscience Conference on Biosustainability, Hillerød, Denmark (2015)
- 167. Metagenome analysis of the human gut microbiome, Nobel Symposium, Gothenburg, Sweden (2015)
- 168. Combining systems biology and adaptive laboratory evolution for mapping genotype-phenotype relations in yeast, Ho-Am Forum, Seoul, South Korea (2015)

- 169. Impact of synthetic biology on metabolic engineering of yeast, Eukaryotic Synthetic Biology, EMBO/EMBL Symposium, Heidelberg, Germany (2015)
- 170. Studies of metabolic diseases and cancer through genome-scale metabolic modelling of human metabolism, 11<sup>th</sup>
  International Conference on Pathways, Networks and Systems Medicine, Aegean Conferences, Crete, Greece (2015)
- 171. Acquiring novel phenotypes of yeast through adaptive laboratory evolution, Adler Symposium, University of Gothenburg, Gothenburg, Sweden (2015)
- 172. Mathematical modelling of yeast: A driver for innovation in biotechnology and medicine. 27<sup>th</sup> International Conference on Yeast Genetics and Molecular Biology, Levico Terme, Italy (2015)
- 173. Global regulation of yeast metabolism. 27<sup>th</sup> International Conference on Yeast Genetics and Molecular Biology, Levico Terme, Italy (2015)
- 174. Metabolism of the gut microbiome: New insights through genome-scale metabolic modelling. 4th Conference on Construction Based Reconstruction and Analysis, Heidelberg, Germany (2015)
- 175. Systems biology of yeast metabolism. IMYA11, Porto, Portugal (2015)
- 176. Metabolism of the gut microbiome: New insights through genome-scale metabolic modelling. Copenhagen Bioscience Conference on Metabolism, Hillerød, Denmark (2015)
- 177. Integrative analysis of omics data for studying metabolism in human disease. BILS Annual Meeting, Stockholm, Sweden
- 178. Meabolism of the gut microbiome: New insights through genome-scale metabolic modelling. The First KSSEA Workshop, Stockholm, Sweden (2015)
- 179. Advancing the Design-Build-Test Cycle for Metabolic Engineering. Metabolic Engineering Summit 2015, Beijing, China (2015)
- 180. Systems biology for mapping genotype-phenotype relations in yeast. KAUST Research Conference on Computationa and Experimental Interfaces of Big Data and Biotechnology, KAUST, Saudi Arabia (2016)
- 181. Systems Biology of yeast metabolism. Jahrestagung der Vereinigung für Allgemeine und Angewandte Mikrobiologie (VAAM), Jena, Germany (2016)
- 182. Metabolic engineering of yeast. Biosystems Design 2.0, A-Star, Singapore (2016)
- 183. Yeast as a platform cell factory. Gaden Award Lecture, ACS Annual Meeting, San Diego, USA (2016)
- 184. Assessing the human gut microbiota in metabolic disease. FEAM Workshop on Precission Medicine, Bern, Switzerland (2016)
- 185. Metabolic engineering of yeast. Metabolic Engineering 12, Awaji Island, Japan (2016)
- 186. Engineering yeast metabolism for production of fuels and chemicals. European Congress on Biotechnology, Krakow, Poland (2016)
- 187. Systems biology of yeast metabolism. ICY2016, Awaji Island, Japan (2016)
- 188. Systems biology of yeast metabolism. FISV2016, Rome, Italy (2016)
- 189. Systems biology of industrial microorganisms. 13<sup>th</sup> International Symposium on the Genetics of Industrial Microorganisms, Wuhan, China (2016)
- 190. Genome-scale metabolic modelling of yeast. The International Conference on Metabolic Science, Shanghai, China (2016)
- 191. Biobased production of fuels and chemicals: Barriers and opportunities. International Forum on Innovation and Emerging Industries Development (IEID), Shanghai, China (2016)
- 192. A systems biology approach to measuring human-microbiome interactions. Microbiome Drug Development Summit Europe, Paris (2017)
- 193. Biomarker and diagnostics development using omics integration into human metabolic networks. 12<sup>th</sup> Biomarker Congress, Manchester, UK (2017)
- 194. Assessing the human gut microbiota in metabolic diseases. Symbiosis in Evolution, Biology and Human Health. IBPS International Symposium, Paris, France (2017)
- 195. Systems Biology of Metabolism. BioSB 2017, Lunteren, The Netherlands (2017)
- 196. Systems Biology of Yeast Metabolism. 12th International Meeting on Yeast Apoptosis, Bari, Italy (2017)
- 197. Systems Biology of Yeast Lipid Metabolism. 13th Yeast Lipid Conference, Paris, France (2017)
- 198. Controlling Metabolism: From Microorganisms to Human. Molecular Frontiers Symposium, Royal Swedish Academy of Science, Stockholm, Sweden (2017)
- 199. Metabolic engineering of yeast for production of fuels and chemicals. 14<sup>th</sup> International Conference on Renewable Resources and Biorefineries, Wroclaw, Poland (2017)
- 200. Solving environmental challenges using life science, Where is Life Science, Stockholm, Sweden (2017)
- 201. Quantifying global rewiring of metabolism in cancer through genome scale modelling. Feeding the beast the metabolic landscape of the tumour and its host, Glasgow, Scotland (2017)
- 202. Systems metabolic engineering of yeast. 28th International Conference on Yeast Genetics and Molecular Biology, Prague, Czech Republic (2017)
- 203. Systems biology of yeast metabolism. Emerging Topics in Biological Networks and Systems Biology, Uppsala, Sweden (2017)
- 204. Synthetic biology of yeast. 6<sup>th</sup> International Conference of the International Chemical Biology Society, Shanghai, China (2017)
- 205. Systems biology of yeast metabolism. Metabolic Engineering Summit 2017, Beijing, China (2017)
- 206. Engineering yeast for production of advanced biofuels. Fuel Choices and Smart Mobility Summit 2017. Tel Aviv, Israel (2017)
- 207. Quantifying global rewiring of metabolism in cancer through genome-scale modelling. The 1<sup>st</sup> International Symposium for Trans-Omics, University of Tokyo, Japan (2017)
- 208. Metabolic engineering of yeast for production of fuels and chemicals. SynBio UK 2017, Manchester, UK (2017)
- 209. Metabolic engineering of yeast. Sino-Swedish Workshop, Shandong University, Qingdao, China (2018)

- 210. Systems biology of yeast metabolism. Advancing Synthetic Biology, Beijing University of Chemical Technology, Beijing, China (2018)
- 211. Systems biology of yeast metabolism. Metabolic Engineering 12, Munich, Germany (2018)
- 212. Genome-scale modelling of yeast. COBRA5, Seattle, USA (2018)
- 213. Systems biology of yeast metabolism. EMBO Workshop on Experimental Approaches to Evolution and Ecology Using Yeast and Other Model Systems, Heidelberg, Germany (2018)
- 214. Engineering yeast metabolism using synthetic biology. 2018 World Life Science Conference, Beijing, China (2018)
- 215. Systems biology of yeast metabolism. Nature Conference on Cellular Metabolism, Xiamen, China (2019)

# Webinars and other web-based talks (not complete)

- 1. Industrial Systems Biology, Society for Biological Engineering, 2009. www.aiche.org/sbe/
- 2. Impact of systems biology on metabolic engineering, in H. Kitano (Ed), Systems Biology: The Biomedical and Life Science Collection, Henry Stewart Talks Ltd., London, 2014. http://hstalks.com/?t=BL1893791-Nielsen
- 3. Advancing the design-build-test cycle for metabolic engineering of yeast. SBE Webinar, AIChE, USA
- 4. Systems Biology of Yeast Metabolism. CHASSY Webinar, University of Cork, Ireland

## **Invited seminar presentations (not complete)**

- 1. Design of an on-line monitoring system for lactic acid fermentations, Ciba Geigy, Basel, Switzerland (1987)
- 2. Automation of laboratory fermentors, Technical University of Denmark, Lyngby (1987)
- 3. On-line monitoring of lactic acid fermentation, Department of Chemical Engineering, Caltech, Pasedena, California (1988)
- 4. Application of FIA for on-line monitoring of fermentation processes, Technion, Lund, Sweden (1988)
- 5. Structured modelling of microbial systems, Technical University of Denmark, Lyngby (1989)
- 6. Experimentally verification of fermentation models, University of Lund, Sweden (1990)
- 7. Structural models for fermentation processes, Departmental seminar, Institut für Biotechnologie, Technische Universität Graz, Austria (1990)
- 8. Modelling and on-line monitoring of fermentation processes, Departmental seminar, Institut für Technische Chemie, Universität Hannover, Germany (1990)
- 9. Verification of structured models for fermentation processes, Departmental seminar, Kemisk Reaktionsteknik, Chalmars Tekniska Högskola, Gothenburg, Sweden (1991)
- Modelling of filamentous microorganisms, Department of Chemical Engineering, University of Michigan, Ann Arbor, Michigan (1992)
- 11. On-line monitoring and modelling of microbial processes, Departmental seminar, Department of Biochemical Engineering, Indian Institute of Technology, New Delhi (1992)
- 12. Growth of filamentous fungi An engineers perspective, Seminar at University of Manchester, Manchester (1992)
- 13. On-line monitoring of filamentous fungi fermentations, Meeting of EFB Working Party on "Measurement and Control", Florence (1993)
- Modelling of filamentous growth, Meeting of DECHEMA Working Party on "Messung und Regelung in Biotechnologie", Frankfurt (1993)
- 15. Industriel anvendelse af skimmelsvampe, Dansk Ingeniørforening, Copenhagen (1994)
- 16. Metabolic flux analysis of the penicillin fermentation, Institute of Chemical Metalurgy, Chinese Academy of Science, Beijing (1994)
- 17. Mathematical models An excellent tool in physiological studies of filamentous fungi, Department of Chemical Engineering, University of Minnesota, Minneapolis (1994)
- 18. Physiological Engineering of filamentous fungi, Departmental Seminar, Department of Chemical Engineering, MIT, Cambridge (1994)
- Physiological Engineering. The integration of microbial physiology and chemical engineering, Department of Chemical Engineering, MIT, Cambridge, USA (1996)
- 20. Modelling the growth of filamentous microorganisms, Departmental seminar, Department of Chemical Engineering, Tufts University, Medford, USA (1996)
- 21. Modelling the growth of filamentous microorganisms, Departmental seminar, Department of Chemical and Biochemical Engineering, University of Western Ontario, London, Canada (1996)
- 22. Modelling the growth of filamentous fungi, Department of Chemical Engineering, MIT, Cambridge (1996)
- 23. Metabolic Engineering, University of Shandong, Jinan (1996)
- 24. Metabolic flux analysis of filamentous fungi, BASF, Ludwigshafen (1996)
- 25. Metabolic Flux Analysis, Departmental seminar, Department of Chemical Engineering, Xinghua University, Beijing, China (1996)
- 26. Biochemical analysis of the penicillin biosynthetic pathway, Departmental Seminar, Department of Microbiology, Technical University of Denmark, Lyngby, Denmark (1997)
- 27. Biochemical characterization of the penicillin biosynthetic pathway, Departmental Seminar, Institut für Biotechnologie, ETH, Zürich, Switzerland (1997)
- 28. Metabolic engineering. Methods and applications, Institute seminar, Institut für Biotechnologie, Forschungszentrum Jülich, Germany (1998)

- 29. Enzyme production by Aspergillus. Biochemical engineering methods for fundamental research and process optimisation, Seminar, Carlsberg Laboratory, Copenhagen, Denmark (1999)
- 30. Metabolomics, Seminar, Biologisk Selskab, Copenhagen, Denmark (2000)
- 31. Metabolic Engineering and Functional Genomics, Seminar, Novo Nordisk, Bagsværd, Denmark (2000)
- 32. Metabolic Engineering and Functional Genomics, Seminar, Chr. Hansen, Hørsholm, Denmark (2000)
- 33. Metabolic Engineering and Functional Genomics, Bjerrum-Brøndsted-Lang lecture, Carlsberg Laboratory, Denmark (2000)
- 34. Metabolic engineering of Penicillium chrysogenum for improved β-lactam production, Seminar, Microbia, Cambridge, USA (2001)
- 35. Analysis of metabolism: Control of fluxes, Seminar, BASF, Ludwigshafen, Germany (2001)
- 36. The role of Functional Genomics in Metabolic Engineering, Seminar, EPFL, Lausanne, Switzerland (2001)
- 37. Metabolomics, Seminar, Genomics in Food Science, KVL, Denmark (2002)
- 38. From quantitative physiology to metabolic engineering and systems biology, Sunner Memorial Lecture, Lund University, Lund, Sweden (2002)
- 39. Hough Memorial Lecture, University of Birmingham, Birmingham, UK (2004)
- 40. Metabolic engineering: Impacts of functional genomics, Seconda Università degli Studi di Napoli, Naples, Italy (2005)
- 41. Linking the transcriptome and the metabolome through genome-scale metabolic models, University Milano-Bicocca, Milan, Italy (2005)
- 42. Systems Biology: Current status and future challenges, NTNU, Trondheim, Norway (2005)
- 43. Systems Biology of Yeasts: Impacts on Metabolic Engineering and Basic Sciences, The National Hellenic Research Foundation, Athens, Greece (2006)
- 44. Impacts of systems biology on biotech process based on yeast, Merck, West Point, USA (2006)
- 45. The role of metabolic engineering in the improvement of industrial processes, BIOTEC, Bangkok, Thailand (2006)
- 46. Yeast systems biology: A vehicle for medical and biotechnological research, Department of Chemical and Biological Engineering. Chalmers University of Technology, Gothenburg, Sweden (2007)
- 47. Yeast as a model organism for studying nutragenomic, Department of Systems Biology, ETH Zürich, Switzerland (2007)
- 48. Systems Biology and Synthetic Biology, Beijing University of Chemical Technology, Beijing, China (2007)
- 49. Systems Biology of lipid metabolism in yeast, Department of Biotechnology, University of Graz, Austria (2008)
- 50. Systems Biology as a driver for industrial biotechnology, Department of Chemical Engineering, Catholic University of Chile, Santiago, Chile (2008)
- 51. Systems Biology of Lipid Metabolismi, Departmental Seminar, Institute for Molecular Biosciences, Universität Graz, Austria (2008)
- 52. Industrial systems biology: Yeast and Aspergillus as cell factories for sustainable production of chemicals, Sandoz, Kundl, Austria (2008)
- Industrial Systems Biology: Yeast and Filamentous Fungi as Cell Factories for Sustainable Production of Chemicals, Departmental Seminar, Department of Chemical Engineering, Rice University, Houston, Texas, USA (2008)
- 54. Yeast systems biology: Does this have any medical relevance? Wallenberg Laboratory, Sahlgrenska Academy, Gothenburg, Sweden (2008)
- 55. Industrial systems biology, Amyris, Berkeley, USA (2009)
- 56. Understanding the function of biological networks through systems biology, Faculty of Science and Mathematics, University of Zagreb, Zagreb, Croatia (2009)
- 57. Systems biology of metabolism: From yeast to mammals, Department of Bioengineering, UC San Diego, California, USA (2009)
- 58. Industrial systems biology, Genomatica, San Diego, USA (2009)
- 59. Industrial systems biology: Yeast and Aspergilli as cell factories for sustainable production of chemicals. CJ Company, Seoul, South Korea (2010)
- 60. Engineering the metabolism of yeast cell factories, Novo Nordisk Foundation, Denmark (2010)
- 61. Development of yeast as a platform cell factory for production of fuels and chemicals through industrial systems biology, Tufts University, Boston, USA (2010)
- 62. Impact of systems biology on synthetic biology, Yale University, New Haven, USA (2010)
- 63. Yeast Systems Biology, Carlsberg Laboratory, Copenhagen, Denmark (2010)
- 64. Biorefinery. Cell Factory Design and Implementation, World Council of Industrial Biotechnology meeting, Beijing, China (2010)
- 65. Development of Yeast as a Platform Cell Factory, Joint Bioenergy Institute, Berkeley, USA (2011)
- 66. Insights into Metabolic Diseases through Systems Biology, SomaLogic, Boulder, USA (2011)
- 67. Systems Biology: Integrated Analysis of Human Metabolism through the Human Metabolic Atlas, Rigshospitalet, Copenhagen, Denmark (2011)
- 68. Yeast as a Cell Factory Platform for Production of Fuels and Chemicals, University of Umeå, Umeå, Sweden (2011)
- 69. Biochemical Engineering as the Foundation of Systems Biology, Synthetic Biology and Metabolic Engineering, Seminar in connection with Prof. Reuss, University of Stuttgart, Germany (2011)
- 70. Systems Biology, Synthetic Biology and Metabolic Engineering of Yeast, Genomatica, San Diego, USA (2011)
- 71. The role of DNA and RNA sequencing in systems biology, University of Gothenburg, Gothenburg, Sweden (2012)
- 72. Metabolic modelling applied to metabolic engineering and systems medicine, Departmental Seminar, Department of Chemical Engineering, MIT, Cambridge, USA (2012)
- 73. Systems biology of yeast, Gevo, Denver, USA (2012)
- Production of recombinant proteins by yeast, Department of Chemical and Biological Engineering, Chalmers University of Technology, Gothenburg, Sweden (2012)

- 75. The Human Metabolic Atlas: A novel resource for studying cancer metabolism, Dana Faber Center for Cancer Systems Biology, Boston, USA (2012)
- Genome-scale metabolic models as a scaffold for integrative analysis of metabolomics data, Umeå University, Umeå, Sweden (2013)
- 77. Systems biology: Yeast as a platform cell factory, Shanghai Jiao Tong University, Shanghai, China (2013)
- 78. The Human Metabolic Atlas: A novel resource for studying metabolic diseases and cancer, Astra-Zeneca Bioinformatics Seminar, Mölndal, Sweden (2014)
- 79. Yeast systems biology, Odense University, Odense, Denmark (2014)
- 80. Yeast as a platform cell factory for production of fuels and chemicals, Genomics Science, UNAM, Mexico City, Mexico (2014) (Webinar)
- 81. Metabolism and its role in production of advanced biofuels, obesity and cancer. KVVS, Gothenburg, Sweden (2014)
- 82. Systems Biology: From microbe to man. Department of Genetics and Microbiology, Trinity College Dublin, Ireland (2014)
- 83. Systems Biology: From Microbe to Man. Department of Chemistry, EPFL, Lausanne, Switzerland (2014)
- 84. Systems Biology of Metabolism: A Journey from Yeast to Cancer. Svenska Kemistsamfundet, Gothenburg, Sweden (2014)
- 85. Impact of Systems Biology on Industrial Biotechnology. Systems Biology and Systems Medicine, Lake Como School of Advanced Studies, Como, Italy (2014)
- 86. Genome wide reprogramming of human metabolism in response to obesity and cancer. Systems Biology and Systems Medicine, Lake Como School of Advanced Studies, Como, Italy (2014)
- 87. Genome wide reprogramming of human metabolism in response to obesity and cancer. Kemiska Institut, Ljubljana, Slovenia (2014)
- 88. From metagenomics to systems biology of the gut ecosystem. MetaCardis Annual Meeting, Gothenburg, Sweden (2014)
- 89. Metabolic Engineering and Systems Biology of Yeast. School of Life Sciences, Tsinghua University, Beijing, China (2014)
- 90. Yeast as a platform cell factory in future biorefineries. Institute of Biotechnology, Wuhan University, Wuhan, China (2014)
- 91. Metabolic engineering and synthetic biology of yeast. Energy Biosciences Institute, UC Berkeley, USA (2014)
- 92. Prospects for systems biology and modelling of the gut microbiome. EPFL, Switzerland (2015)
- 93. The Human Metabolic Atlas: A resource for studying metabolic diseases. SciLifeLab Day, Karolinska Institute, Stockholm, Sweden (2015)
- 94. Metabolic engineering and synthetic biology of yeast. Chung-Ang University, Seoul, South Korea (2015)
- 95. Genome scale modelling of human metabolism. University of Ljubljana, Ljubljana, Slovenia (2015)
- Mapping Genotype Phenotype Relations in Yeast through Systems Biology. Novozymes Symposium, Copenhagen, Denmark (2015)
- 97. Yeast as a Platform Cell Factory for Production of Fuels and Chemicals. Zhang Dayu Lectureship, Dalian Institute for Chemical Physics, Chinese Academy of Science, Dalian, China (2015)
- 98. Impacts of Systems Biology on Metabolic Engineering. Department of Chemical Engineering, University of Princeton, Princeton, USA (2015)
- 99. Big data in life science: Cancer and gut microbiome research. Big Data Seminar, Chalmers University of Technology, Gothenburg, Sweden (2016)
- 100. Yeast as a platform cell factory for the production of fuels and chemical, Novozymes Prize Lecture, Chalmers University of Technology, Gothenburg, Sweden (2016)
- 101. Metabolic engineering, synthetic biology and microbiome, Ajinomoto, Tokyo, Japan (2016)
- 102. Metabolic engineering of yeast, Beijing University of Chemical Technology, Beijing, China (2016)
- 103. Metabolic engineering of yeast, Tian Gong Symposium, Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences, Tianjin, China (2016)
- 104. Systems Biology of Metabolism. Volterra Lecture, Norwegian University of Life Sciences, Ås, Norway (2017)
- 105. Studies of metabolic diseases and cancer using gneome-scale metabolic models for human metabolism. Astra Zeneca, Mölndal, Sweden (2017)
- 106. Systems biology of yeast metabolism. Manchester Institute for Biotechnology, Manchester University, UK (2017)
- 107. Yeast as a platform cell factory for the production of fuels and chemicals. Shanghai Institute for Plant Physiology and Ecology, Chinese Academy of Science, Shanghai, China (2017)
- 108. Yeast as a platform cell factory for the production of fuels and chemicals. East China University of Science and Technology, Shanghai, China (2017)
- 109. Yeast as a platform cell factory for the production of fuels and chemicals. Jiangnan University, Wuxi, China (2017)
- 110. Metabolic engineering of yeast for production of fuels and chemicals. Department of Life Science, Swedish Agricultural University, Uppsala, Sweden
- 111. Towards biobased production of fuels and chemicals. Politechnico di Torino, Torino, Italy (2017)
- 112. Towards biobased production of fuels and chemicals. Universita degli Studi della Basillicata, Portenza, Italy (2017)
- 113. Metabolic engineering of yeast for production of fuels and chemicals. Department of Molecular Sciences, Swedish University of Agricultural Sciences, Uppsala, Sweden (2017)
- 114. What does biofuels and cancer have in common? Royal Academy of Engineering Sciences, Stockholm, Sweden (2017)
- 115. Assessing the human gut microbiota in metabolic disease. Royal Academy of Engineering Sciences, Stockholm, Sweden (2017)
- 116. Research leadership, mentoring, publishing and innovation. Copenhagen Bioscience Lectures, the Novo Nordisk Foundation, Copenhagen, Denmark (2018)

- 117. Systems biology of yeast metabolism. Tartu University, Tartu, Estonia (2018)
- 118. Systems biology of yeast metabolism. EPLF, Lausanne, Switzerland (2018)
- 119. Systems biology of yeast metabolism. Technical University of Denmark, Lyngby, Denmark (2018)
- 120. Systems biology of yeast metabolism. China National Gene Bank, Shenzhen, China (2018)
- 121. Metabolic engineering of yeast. Chinese Academy of Traditional Chinese Medicines, Beijing, China (2018)
- 122. Metabolic engineering of yeast. Beijing Technology and Management University, Beijing, China (2018)
- 123. Systems biology of yeast metabolism. Zymergen, Emmeryville, USA (2018)
- 124. Metabolic modelling of the human gut microbiome. SERES Pharmaceuticals, Cambridge, USA (2018)
- 125. Systems biology of yeast metabolism. Ginko Bioworks, Boston, USA (2018)
- 126. Quantifying cancer metabolism through genome-scale metabolic modelling, Koch Institute, MIT, Cambridge, USA (2018)
- 127. Systems biology of yeast metabolism. Joint BioEnergy Institute, Emmeryville, USA (2018)
- 128. Systems biology of metabolism. California Institute of Technology, Pasadena, USA (2018)
- 129. Systems biology of yeast metabolism. Provivi, Santa Monica, USA (2018)
- 130. Systems biology of yeast metabolism. Jiangnan University, Wuxi, China (2019)

# List of Conferences co-organized

# Chair/Co-Chair of Organizing Committee

- 1. Danish Biotechnology Conference I, Munkebjerg, Denmark (1995) (130 participants) Chair
- 2. Danish Biotechnology Conference II, Munkebjerg, Denmark (1996) (130 participants) Chair
- 3. Danish Biotechnology Conference III, Munkebjerg, Denmark (1997) (180 participants) Chair
- 4. Danish Biotechnology Conference IV, Munkebjerg, Denmark (1998) (130 participants) Chair
- 5. Danish Biotechnology Conference V, Munkebjerg, Denmark (1999) (120 participants) Chair
- 6. European Symposium on Biochemical Engineering Science 3, Copenhagen, Denmark (2000) (300 participants) **Chair**
- 7. Metabolic Engineering IV, Il Ciocco, Italy (2002) (250 participants) Chair
- 8. 7th European Conference on Fungal Genetics, Copenhagen, Denmark (800 participants) Co-Chair
- 9. European Congress on Biotechnology 12, Copenhagen, Denmark (2005) Chair of Scientific Committee
- 10. Swedish Bioinformatics Workshop, Gothenburg, Sweden (2010) (100 participants) Chair
- 11. Gothenburg Life Science Conference XI, Gothenburg, Sweden (2010) (150 participants) Chair
- 12. Key Sympoisum on Translational and Systems Medicine, Stockholm, Sweden (2011) (150 participants)

  Chair
- 13. Copenhagen Bioscience Conference on Biosustainability, Hilleröd, Denmark (2013) (150 participants). Co-chair
- Copenhagen Bioscience Conference on Biosustainability, Hilleröd, Denmark (2015) (150 participants).
   Chair

# **Member of Organizing Committee**

- 1. Danish Biotechnology Conference VI, Munkebjerg, Denmark (2000)
- 2. Danish Biotechnology Conference VII, Munkebjerg, Denmark (2001)
- 3. Symposium on Physiology of Yeast and Filamentous Fungi, Hindsgavl, Denmark (2001)
- 4. Danish Biotechnology Conference VIII, Munkebjerg, Denmark (2002)
- 5. 2<sup>nd</sup> International Conference on Analysis of Microbial Cells at the Single Cell Level, Munkebjerg, Denmark (2002)
- 6. Danish Biotechnology Conference IX, Munkebjerg, Denmark (2003)
- 7. Danish Biotechnology Conference X, Munkebjerg, Denmark (2004)
- 8. The 9th International Conference on Systems Biology, Gothenburg, Sweden (2008)
- 9. 35<sup>th</sup> FEBS Congress, Gothenburg, Sweden (2010)
- 10. Industrial Systems Biology 2010, Gothenburg, Sweden (2010)
- 11. Key Symposium on Systems Medicine, Salsjöbaden, Sweden (2011)
- 12. Copenhagen Bioscience Conference, Hillerød, Denmark (2013)
- 13. Eukaryotic Synthetic Biology, Heidelberg, Germany (2015)
- 14. Copenhagen Bioscience Conference, Hillerød, Denmark (2015)
- 15. Metabolic Engineering Summit, Beijing, China (2017)

# Member of Scientific/Advisory Committee

- 1. Modeling for Improved Bioreactor Performance II, Otocec, Slovenia (1994)
- 2. Yeast as a Cell Factory, Vlaardingen, The Netherlands (1998)
- 3. ISSY22: Yeast fermentations and other yeast bioprocesses, Pilansberg, South Africa (2002)
- 4. European Symposium on Biochemical Engineering Science 4, Delft, The Netherlands (2002)
- 5. Metabolic Engineering V. Taos, USA (2004)
- 6. European Symposium on Biochemical Engineering Science 5, Stuttgart, Germany (2004)
- 7. Biochemical Engineering XIV, Harrison Hot Springs, Canada (2005)
- 8. 8th European Conference on Fungal Genetics, Vienna, Austria (2006)
- 9. Metabolic Engineering VI, Noordwijkerhout, The Netherlands (2006)
- 10. ISSY25: Systems Biology of Yeasts from Models to Applications, Espoo, Finland (2006)
- 11. FOSBE 2007, Stuttgart, Germany (2007)
- 12. 9th European Conference on Fungal Genetics, Edinburgh, UK (2008)
- 13. Metabolic Engineering VII, Puerto Vallarta, Mexico (2008)

- 14. 13th International Biotechnology Symosium and Exhibition, Dalian, China (2008)
- 15. 12<sup>th</sup> International Congress on Yeasts, Kiev, Ukraine (2008)
- 16. FOSBE 2009, Englewood, USA (2009)
- 17. ISSY27: Yeast for health and biotechnologies, Paris, France (2009)
- 18. PYFF4, Rotterdam, The Netherlands (2010)
- 19. Metabolic Engineering VIII, Jeju Island, South Korea (2010)
- 20. 10<sup>th</sup> European Conference on Fungal Genetics, Leiden, The Netherlands (2010)
- 21. 14<sup>th</sup> International Biotechnology Symposium and Exhibition, Rimini, Italy (2010)
- 22. Microbial Stress: From Molecules to Systems, Beligrate, Italy (2012)
- 23. Metabolic Engineering IX, Biarritz, France (2012)
- 24. Metabolic Engineering X, Vancouver, Canada (2014)
- 25. Metabolic Engineering Summit, Beijing, China (2015)
- 26. Metabolic Engineering 11, Ajawi Island, Japan (2016)
- 27. ISSY33, Cork, Ireland (2017)
- 28. Metabolic Engineering 12, Munich, Germany (2018)

# **Research Supervision**

#### **Affiliated Senior Researchers**

- 1. Verena Siewers, Senior Researcher & Docent, DTU & Chalmers (2006-)
- 2. Yun Chen, Resarcher & Docent, Chalmers (2008-)
- 3. Joakim Norbeck, Researcher & Docent, Chalmers (2015-)
- 4. Eduard Kerkhoven, Researcher, Chalmers (2013-)
- 5. Zihe Liu, Associate Professor, BUCT (2017-)

### **Current Post Doctoral Researchers**

- 1. Boyang Ji, Chalmers (2013-)
- 2. Zhiwei Zhu, Chalmers (2014-)
- 3. Tao Yu, Chalmers (2014-)
- 4. Jun Geng, Chalmers (2015-)
- 5. Yi Liu, Chalmers (2015-)
- 6. Jiufu Qin, Chalmers & DTU (2015-)
- 7. Kate Campbell, Chalmers (2016-)
- 8. Jonathan Robinson, Chalmers (2016-)
- 9. Rui Pereira, Chalmers (2016-)
- 10. Xiaowei Li, Chalmers (2016-)
- 11. Quanli Liu, Chalmers (2016-)
- 12. Yiming Zhang, BUCT (2016-)
- 13. Daniel Cook, Chalmers (2017-)
- 14. Tyler Doughty, Chalmers (2017-)
- 15. Hongzhong Lu, Chalmers (2017-)
- 16. Pinar Kocabas, Chalmers (2017-)
- 17. Ling-Oun Ye. Chalmers (2017-)
- 18. Rosemary Yu, Chalmers (2017-)
- 19. Yeping Zhang, BUCT (2017-)
- 20. Hao Wang, Chalmers (2017-)
- 21. Yu Chen, Chalmers (2018-)
- 22. Ievgeniia Tiukova, Chalmers (2018-)

#### **Former Post Doctoral Researchers**

- 1. Lars Højlund Christensen, DTU (1992-1994)
- 2. Gunnar Liden, DTU (1993-1994)
- 3. Lisbeth OIsson, DTU (1994-1996)
- 4. Morten Carlsen, DTU (1995-1997)
- 5. Anne Santerre Henriksen, DTU (1995-1999)
- 6. Aradhana Srivastava, DTU (1996-1998)
- 7. Hans Peter Smits, DTU (1996-1999; 2000-2001)
- 8. Alexei Aleksenko, DTU (1997-2001)
- 9. Philippe Duboc, DTU (1997-1999)
- 10. Fernando Bautista, DTU (1998-1999)
- 11. Uffe Mortensen, DTU (1999-2002)
- 12. Ana Borges, DTU (1999-2001)
- 13. Bjarke Christensen, DTU (1999-2001)
- 14. Mhairi Workman, DTU (1999-2004)
- 15. Birgitte Regenberg, DTU (1999-2005)
- 16. Anna Eliasson Lantz, DTU (2000-2002)
- 17. Christian Müller, DTU (2001-2002)
- 18. Vsevolod Serebrianyi, DTU (2001-2002)
- 19. Mats Åkesson, DTU (2001-2003)
- 20. Kasper Møller, DTU (2001-2003)
- 21. Per Bruheim, DTU (2002)
- 22. Vasimon Ruanglek, DTU (2002)
- 23. Tamay Seker, DTU (2002-2003)
- 24. Sandrine Mas, DTU (2002-2005)
- 25. Gerald Hofmann, DTU (2004-2006)
- 26. Roberta Mustachi, DTU (2004-2007)

- 27. Jerome Maury, DTU (2004-2008)
- 28. Isabel Rocha, DTU (2004)
- 29. Jette Thykær, DTU (2005-2007)
- 30. Dongmei Bai, DTU (2005-2007)
- 31. Michael Jewett, DTU (2005-2008)
- 32. Goutham Vemuri, DTU (2006-2007)
- 33. Manuel Quiros Asensio, DTU (2006-2008)
- 34. Prashant Bapat, DTU (2006-2008)
- 35. Sven Even Borgos, DTU (2007)
- 36. Dina Petranovic, DTU (2007-2008)
- 37. Subir Kumar Nandy, Chalmers (2008-2010)
- 38. Keith Tyo, Chalmers (2008-2010)
- 39. Marija Cvijovic, Chalmers (2008-2010)
- 40. Andrea Neiss, Chalmers (2009-2010)
- 41. Wanwipa Vongsangnak, Chalmers (2010)
- 42. Liming Liu, Chalmers (2009-2010)
- 43. Sergio Bordel Velasco (2008-2010)
- 44. Intawat Nookaew (2008-2012)
- 45. Jin Hou, Chalmers (2010-2012)
- 46. Fredrik Öberg, DTU (2011-2012)
- 47. Shuobo Shi, Chalmers (2009-2012)
- 48. Luis Caspeta, Chalmers (2009-2013)
- 49. Il-Kwon Kim, Chalmers (2010-2013)
- 50. Rahul Kumar, Chalmers (2010-2013)
- 51. Antonio Roldao, Chalmers (2010-2013)
- 52. Adil Mardinoglu, Chalmers (2010-2015)
- 53. Marina Sanchez Martinez, Chalmers (2011-2013)
- 54. Manuel Garcia, Chalmers (2012-2014)
- 55. Clara Navarrete, Chalmers (2013-2014)
- 56. Zheng Wang, Chalmers (2013-2014)
- 57. Subazini Thankaswarmy, Chalmers (2013-2014)
- 58. Martin Engqvist, Chalmers (2014-2015)
- 59. Anastasia Krivoruchko, Post doc, Chalmers (2010-2016)
- 60. Jose L. Martinez, Chalmers (2011-2015)
- 61. Agata Smialowska, Chalmers (2014-2015)
- 62. Sunjae Lee, Chalmers (2014-2015)
- 63. Petri-Jaan Lahtvee, Chalmers (2013-2015)
- 64. Eugene Fletcher, Chalmers (2014-2015)
- 65. Hülya Karaca Gencer, Chalmers (2014-2015)
- 66. Silveira Wendel, Chalmers (2015-2016)
- 67. Min-Kyoung Kang, Chalmers (2014-2016)
- 68. Guodong Liu, Chalmers (2013-2016)69. Mark Bisschops, Chalmers (2014-2016)
- 70. Ömür Kayikci, Chalmers (2014-2016)
- 71. Tatiana Moreira, Chalmers (2015-2016)
- 72. Yongjin Zhou, Chalmers (2012-2016)
- 73. Yongjun Wei, Chalmers (2014-2016)
- 74. Amir Feizi, Chalmers (2016)
- 75. Mingtao Huang, Chalmers (2012-2017)
- 76. Zongjie Dai, Chalmers (2013-2017)
- 77. Partho Sarathi Sen, Chalmers (2014-2017)
- 78. Sakda Khoomrung, Chalmers (2011-2017)
- 79. Michael Gossing, Chalmers (2014-2017)
- 80. Francesco Gatto, Chalmers (2015-2017)
- 81. JinHo Kim, Chalmers (2016-2018)
- 82. Manish Kumar, Chalmers (2015-2018)
- 83. Petter Holland, Chalmers (2016-2018)
- 84. Sylvain Prigent, Chalmers (2015-2018)85. Ibrahim El-Semman, DTU (2015-2018)
- 86. Francesca Di Bartolomeo, Chalmers (2017-2019)
- 87. Lucy Fang-I Chao, Chalmers (2017-2019)

# **Current PhD Students (main supervisor)**

- 1. Gheorge Manuel Borja Zamfir, DTU (2013-)
- 2. David Bergenholm, Chalmers (2014-)
- 3. Simonas Marcišauskas, Chalmers (2015-)

- 4. Raphael Ferreira, Chalmers (2015-)
- 5. Yating Hu, Chalmers (2015-)
- 6. Dimitra Lappa, Chalmers (2016-)
- 7. Gang Li, Chalmers (2016-)
- 8. Johan Björkeroth, Chalmers (2016-)
- 9. Carl Melina, Chalmers (2016-)
- 10. Rasool Saghaleyni, Chalmers (2016-)
- 11. Christoph Börlin, Chalmers (2016-)
- 12. Ning Qin, BUCT (2016-)
- 13. Johan Gustafsson (2017-)
- 14. John Hellgren (2017-)
- 15. Feiran Li, Chalmers (2017-)
- 16. Qi Qi, Chalmers (2017-)
- 17. Yijin Zhao, BUCT (2017-)
- 18. Peishun Li, Chalmers (2018-)
- 19. Hao Lou, Chalmers (2018-)
- 20. Lingyun Li, BUCT (2018-)
- 21. Angelo Limeta, Chalmers (2019-)

# **Graduated PhD Students (main supervisor)**

- 1. Henrik Jørgensen, DTU (1991-1993)
- 2. Claus Lindvad Johansen, DTU (1991-1993)
- 3. Morten Carlsen, DTU (1992-1995)
- 4. Rong Wei Min, DTU (1992-1995)
- 5. Anders Spohr, DTU (1993-1996)
- 6. Preben Krabben, DTU (1993-1997)
- 7. Claus Maxel Henriksen, DTU (1993-1996)
- 8. Christoffer Klein, DTU (1995-1998)
- 9. Karsten Schmidt, DTU (1995-1998)
- 10. Torben Nissen, DTU (1995-1998)
- 11. Henrik Pedersen, DTU (1996-1999)
- 12. Bjarke Christensen, DTU (1996-1999)
- 13. Teit Agger, DTU (1996-1999)
- 14. Hanne Theilgaard, DTU (1996-1999)
- 15. Simon Østergaard, DTU (1997-2000)
- 16. Wai Prathumpai, DTU (1998-2001)
- 17. Tina Lübbehüsen, DTU (1998-2001)
- 18. Jens Dynesen, DTU (1998-2001)
- 19. Torben Christiansen (1998-2001)
- 20. Christian Müller, DTU (1998-2001)
- 21. Jarno Robin, DTU (1998-2002)
- 22. Jochen Förster, DTU (1999-2002)
- 23. Michael Lynge Nielsen, DTU (1999-2003)
- 24. Jette Thykær, DTU (2000-2005)
- 25. Nina Gunnarsson, DTU (2000-2003)
- 26. Margarida Moreira dos Santos, DTU (1999-2003)
- 27. Christoffer Bro, DTU (2000-2003)
- 28. Gerald Hofmann, DTU (2001-2004)
- 29. Helga David, DTU (2001-2005)
- 30. Thomas Grotkjær, DTU (2001-2004)
- 31. Nadine Eckert-Boulet, DTU (2001-2004)
- 32. Vijay Raghevendrabn, DTU (2001-2005)
- 33. Steen Lund Westergaard, DTU (2002-2005)
- 34. Wian de Jongh, DTU (2002-2005)
- 35. Silas Granato Villas-Boas, DTU (2002-2005)
- 36. Kiran Patil, DTU (2003-2006)
- 37. Songsak Wattanachaisaereekul, DTU (2003-2007)
- 38. Audrey Diano, DTU (2003-2007)
- 39. Torsten Bak Reguira, DTU (2003-2007)
- 40. Irina Borodina, DTU (2004-2008)
- 41. Susan Meijer, DTU (2004-2007)
- 42. Ana Paula Oliveira, DTU (2004-2008)
- 43. Mohammad Asahollahi, DTU (2004-2008)
- 44. Mikael Rørdam Andersen, DTU (2004-2008)
- 45. Jesper Højer Pedersen, DTU (2004-2008)
- 46. Kjeld Kjeldsen, DTU (2005-2008)

- 47. Wanwipa Vongsangnak, Chalmers (2005-2009)
- 48. Jose Manuel Otero, Chalmers (2005-2009)
- 49. Margarita Salazar Pena, Chalmers (2006-2010)
- 50. Jie Zhang, Chalmers (2007-2011)
- 51. Roberto Olivares, Chalmers (2006-2011)
- 52. Pramote Chumnapuen, Chalmers (2008-2012)
- 53. Marta Papini, Chalmers (2008-2012)
- 54. Gionata Scalcinati, Chalmers (2008-2012)
- 55. Siavash Partow, Chalmers (2008-2012)
- 56. Kuk-Ki Hong, Chalmers (2008-2012)
- 57. Liu Zihe, Chalmers (2008-2012)
- 58. Kanokarn Kocharin, Chalmers (2009-2013)
- 59. Rasmus Ågren, Chalmers (2008-2013)
- 60. Tobias Österlund, Chalmers (2009-2014)
- 61. Fredrik Karlsson, Chalmers (2009-2014)
- 62. Christoph Knuf, Chalmers (2009-2014)
- 63. Natapol Pornputtapong, Chalmers (2010-2014)
- 64. Lifang Liu, Chalmers (2010-2014)
- 65. Bouke de Jong, Chalmers (2010-2015)
- 66. Yiming Zhang, Chalmers (2010-2015)
- 67. Francesco Gatto, Chalmers (2012-2015)
- 68. Saeed Shoaie, Chalmers (2011-2015)
- 69. Amir Feizi, Chalmers (2011-2016)
- 70. Leif Väremo, Chalmers (2011-2016)
- 71. Nicolaas Buijs, Chalmers (2011-2016)
- 72. Mingji Li, DTU (2013-2016)
- 73. Edith Angelica Rodriguez Prado, DTU (2013-2016)
- 74. Stefan Tippmann, Chalmers (2012-2016)
- 75. Pouyan Ghaffari Nouran, Chalmers (2013-2017)
- 76. Jens Christian F. Nielsen, Chalmers (2014-2018)
- 77. Paulo Teixeira, Chalmers (2013-2018)
- 78. Jichen Bao, Chalmers (2013-2018)
- 79. Avlant Nilsson, Chalmers (2014-2019)
- 80. Parizad Babaei, Chalmers (2015-2019)
- 81. Benjamín José Sánchez Barja, Chalmers (2014-2019)
- 82. Promi Das, Chalmers (2015-2019)
- 83. Alexandra Bergman, Chalmers (2013-)

### **Current PhD Students (Examiner)**

- 1. Yasaman Dabirian, Chalmers (2016-)
- 2. Elzbieta Rembeza, Chalmers (2017-)
- 3. Yanyan Wang, Chalmers (2017-)
- 4. Veronica Gast, Chalmers (2018-)
- 5. Oliver Konzock, Chalmers (2018-)
- 6. Christos Skrekas, Chalmers (2018-)
- 7. Maximillian Otto, Chalmers (2018-)

#### **Graduated PhD Students (Examiner)**

1. Joachim Almquist, FCC, Sweden (2010-2017)

# **Graduated PhD Students (Co-supervisor)**

- 1. Lars Højlund Christensen, DTU (1989-1992)
- 2. Stig Benthin, DTU (1989-1992)
- 3. Annemarie Gade Pedersen, DTU (1990-1992)
- 4. Simone de Jong Frandsen, DTU (1991-1993)
- 5. Ulrik Schultze, DTU (1992-1995)
- 6. Teresa Zangorilami, DTU (1994-1998)
- 7. Kasper Møller, DTU (1998-2001)
- 8. Mikkel Nordkvist, DTU (2001-2005)
- 9. Renata Usaite, DTU (2004-2008)
- 10. Lasse Pedersen, DTU (2007-2010)
- 11. Kanchana Rueksomtawin Kildegaard, DTU (2004-2011)

- 12. Xiao Chen, DTU (2007-2011)
- 13. Kwanjeera Wanichthanarak, Chalmers (2010-2014)
- 14. Kaisa Thorell, Gothenburg University, Sweden (2010-2014)
- 15. Leonie Wenning, Chalmers (2014-2018)

## **Current Visiting PhD Students (co-supervisor)**

1. Zeinab Hefny, Katholiek University of Leuven, Belgium (2017-)

# Former Visiting PhD Students (co-supervisor)

- 1. Robert Lejeune, Free University of Brussels (1994-1995)
- 2. Pedro N. Pissarra, Kings College London (1994-1995)
- 3. Einar Jonsbu, NTNU (1999-2000)
- 4. Andreas Karoly Gomberg, Sao Paulo University (1998-2000)
- 5. Joel Forest Moxley, MIT (2003-2005)
- 6. Tunahan Cakir, Bogazici University (2004-2005)
- 7. Kazim Yalcin Arga, Bogacizi University (2004-2005)
- 8. Intawat Nookaew, KMUTT (2005-2006)
- 9. Goutham Vemuri, University of Georgia (2005-2006)
- 10. Donatella Cimini, University of Napoli (2006)
- 11. Valeria Mapelli, University Milan-Bicocca (2006-2007)
- 12. Paula Jouhten, Technical University of Helsinki (2008-2009)
- 13. Raphael Aggio, University of Auckland (2009)
- 14. William Alfonso Rodriguez Limas, National University of Mexico (2009-2010)
- 15. Kantida Kusonmano, UMIT (2011)
- 16. Akarin Boonsombuti, Mahasarakham University (2011-2012)
- 17. Jorge Alberto Vasquez Castillo, Antioquia University (2011-2012)
- 18. Josh Michener, Caltech/Stanford (2011)
- 19. Ibrahim E. El-Semman, Assiut University (2012-2014)
- 20. Jiufu Qin, Jiangnan University, China (2011-2014)
- 21. Rui Pereira, University of Minho, Portugal (2012-2014)
- 22. Cheng Zhang, East China University of Science and Technology, China (2013-2015)
- 23. John Casey, University of Hawaii, USA (2014)
- 24. Jacqueline Rand, University of Wisconsin, USA (2014)
- 25. Zahra Azim Zadeh Irani, Tarbiat Modares University, Iran (2014-2015)
- 26. Yu Chen, East China University of Science and Technology, China (2015-2017)
- 27. Chinh Bkrong Nguyen, Oslo University, Norway (2017-2018)
- 28. Zhengming Zhu, Jiangnan University, China (2017-2018)
- 29. Chunjun Zhan, Jiangnan University, China (2017-2018)
- 30. Elias Björnson, Gothenburg University, Sweden (2015-2019)

### **Research Engineers**

- 1. Shaghayegh Hosseini (Data Manager), Chalmers (2013-)
- 2. Angelica Ardehed (Lab Manager), Chalmers (2016-)
- 3. Fredrik Schubert, Chalmers (2016-)
- 4. Emilie Lindquist, Chalmers (2017-)
- 5. Pierre-Etienne Cholley, Chalmers (2017-)
- 6. Virinchi Billa, Chalmers (2017-)
- 7. Mihail Anton, Chalmers (2017-)

### **Current Other Affiliated Researchers and Staff**

1. Martina Butorac (2008-)

### Other Former Affiliated Researchers and Staff

- 1. Tina Johansen, Research Engineer, DTU (1990-2008)
- 2. Lene Christiansen, Research Engineer, DTU (1992-2008)
- 3. Martin Hjortso, Visiting Professor, DTU (1992-1993, 2002-2003)
- 4. Susanne Sloth Larsen, Head of Administration, DTU (1995-1999)
- 5. Jette Mortensen, Laboratory Technician, DTU (1996-2008)
- 6. Birgitte Karsbøl, Administrative Assistant, DTU (1996-2008)

- 7. Kirsten Nielsen, Administrative Assistant, DTU (1998-2005)
- 8. Trine Bro, Head of Administration, CMB, DTU (1999-2008)
- 9. Lars K. Nielsen, Visiting Professor, DTU (2004)
- 10. Stefan Rokem, Visiting Professor, DTU (2004-2005)
- 11. Eduardo Agosin, Visiting Professor, DTU (2005)
- 12. Stefan Rokem, Visiting Professor, Chalmers (2010)
- 13. Pegah Khorramzadeh, Research Engineering, Chalmers (2010-2011)
- 14. Sergio Bordel Velasco, Assistant Professor (2010-2014)
- 15. Suwanee Jansa-Ard, Research Engineer, Chalmers (2011-2014)
- 16. Danilo Porro, Visiting Professor, Chalmers (2012)
- 17. Martin Markström, Co-Director AoA, Chalmers (2011-2014)
- 18. Brian Pfleger, Visiting Professor, Chalmers (2014)
- 19. Malin Nordvall, Research Engineer, Chalmers (2009-2014)
- 20. Emma Ribbenhed, Research Engineer, Chalmers (2013-2015)
- 21. Antonio Marras, Research Assistant Chalmers (2013-2015)
- 22. Ximena Rozo Sevilla, Research Engineer, Chalmers (2011-2015)
- 23. Julia Karlsson, Research Engineer, Chalmers (2014-2016)
- 24. Matthias Nilsson, Research Engineer, Chalmers (2015-2016)
- 25. Daniel Hermansson, Research Engineer, Chalmers (2016)
- 26. Jianye Xia, Visiting Professor, Chalmers (2016-2017)
- 27. Marie Nordqvist, Research Engineering and Lab Manager (2008-2017)
- 28. Takayoshi Fujii, Visiting Researcher, Chalmers (2016-2018)
- 29. Marie-Louise Wennerhag, Financial Officer, Chalmers (2008-2018)
- 30. Felipe Lopez-Isunza, Visiting Professor, Chalmers (2019)