Jens Nielsen CV
Publications, Presentations and Affiliated Researchers

Key Publications

Metabolic Engineering

1. 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
2. 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
3. L. Caspeta; **J. Nielsen** (2013) Economic and environmental impacts of microbial biodiesel. *Nature Biotechnol.* **31**:789-793
4. 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
5. 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
7. 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. M. Huang; J. Bao; B.M. Hallström; D. Petranovic; **J. Nielsen** (2017) Efficient protein production by yeast requires global tuning of metabolism. *Nature Com.* **8**:1131
10. 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
11. 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
12. 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
13. 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
14. Y. Liu; Q. Liu; A. Krivoruchko; S. Khoomrung; **J. Nielsen** (2020) Engineering yeast phospholipid metabolism for *de novo* oleoylethanolamide production. *Nature Chem. Biol.* **16**:197-205
15. Z. Zhu; Y. Hu; P.G. Teixeira; R. Pereira; Y. Chen; V. Siewers; **J. Nielsen** (2020) Multidimensional engineering of *Saccharomyces cerevisiae* for efficient synthesis of medium-chain fatty acids. *Nature Cat.* **3**:64-74
16. J. Qin, A. Krivoruchko; B. Ji; Y. Chen; M. Kristensen, E. Özdemir; J. D. Keasling; M.K. Jensen; **J. Nielsen** (2021) Engineering yeast metabolism for the discovery and production of polyamines and polyamine analogues. *Nature Cat.* **4**:498-509
17. X. Li; Y. Wang; G. Lo; Q. Liu; R. Pereira; Y. Chen; **J. Nielsen** (2021) Metabolic network remodeling enhances yeast's fitness on xylose using aerobic glycolysis. *Nature Cat.* **4**:783-796
18. Q. Liu; Y. Liu; G. Li; O. Savolaiinen; Y. Chen; **J. Nielsen** (2021) *De novo* biosynthesis of bioactive isoflavonoids by engineered yeast cell factories. *Nature Com.* **12**:6085
19. N. Qin; L. Li; X. Ji; R. Pereira; Y. Chen; S. Yin; C. Li; X. Wan; D. Qiu; J. Jiang; H. Lou; Y. Zhang; G. Dong; Y. Zhang; S. Shi; H.J. Jessen; J. Xia; Y. Chen; C. Larsson; T. Tan; Z. Liu; **J. Nielsen** (2023) Flux regulation through glycolysis and respiration is balanced by inositol pyrophosphates. *Cell* **186**:748-76

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
2. 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
4. 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
6. 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
9. 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

10. 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* **116**:17592-17597

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.* **10**:3586

13. R. Yu; K. Campbell; R. Pereira; J. Björkeroth; Q. Qi; E. Vorontsov; C. Sihlbom; **J. Nielsen** (2020) Nitrogen limitation reveals large reserves in metabolic and translational capacities of yeast. *Nature Com.* **11**:1881

14. K. Campbell; J. Westholm; S. Kasvandik; F. Di Bartolomei; M. Mormino; **J. Nielsen** (2020) Building blocks are synthesized on demand during the yeast cell cycle. *Proc. Nat. Acad. Sci. USA* **117**:7575-7583

15. F. Di Bartolomeo; C. Malina; K. Campbell; M. Mormini; J. Fuchs; E. Vorontsov; C.M. Gustafsson; **J. Nielsen** (2020) Absolute yeast mitochondrial proteome quantification reveals trade-off between biosynthesis and energy generation during diauxic shift. *Proc. Nat. Acad. Sci. USA* **117**:7524-7535

16. J. Björkeroth; K. Campbell; C. Malina; R. Yu; F. Di Bartolomeo; **J. Nielsen** (2020) Proteome re-allocation from amino acid biosynthesis to ribosomes enables yeast to grow faster in rich media. *Proc. Nat. Acad. Sci. USA* **117**:21804-21812

17. Y. Chen; F. Li; J. Mao; Y. Chen; **J. Nielsen** (2021) Yeast optimizes metal utilization based on metabolic network and enzyme kinetics. *Proc. Nat. Acad. Sci. USA* **118**:e2020154118

18. Y. Chen; **J. Nielsen** (2021) In vitro turnover numbers do not reflect in vivo activities of yeast enzymes. *Proc. Nat. Acad. Sci. USA* **118**:e2108391118

19. G. Li; Y. Hu; J. Zrimec; H. Lou; H. Wang; A. Zelezniak; B. Ji; **J. Nielsen** (2021) Bayesian genome scale modeling identifies termal determinants of yeast metabolism. *Nature Com.* **12**:190

20. Y. Chen; F. Li; J. Mao; Y. Chen; **J. Nielsen** (2021) Yeast optimizes metal utilization based on metabolic network and enzyme kinetics. *Proc. Nat. Acad. Sci. USA* **118**:e2020154118

21. R. Yu; E. Vorontsov; C. Sihlbom; **J. Nielsen** (2021) Quantifying absolute gene expression profiles reveals distinct regulation of central carbon metabolism genes in yeast. *eLife* **10**:e65722

22. H. Lu; F. Li; L. Yuan; I. Domenzain; R. Yu; H. Wang; G. Li; Y. Chen; B. Ji; E.J. Kerkhoven; **J. Nielsen** (2021) Yeast metabolic innovations emerged via expanded metabolic network and gene positive selection. *Mol. Systems Biol.* **17**:e10427

23. F. Li; L. Yuan; H. Lu; G. Li; Y. Chen; M.K.M. Engqvist; E.J. Kerkhoven; **J. Nielsen** (2022) Deep learning based k_{cat} prediction enables improved enzyme constrained model reconstruction. *Nature Cat.* **5**:662-672

24. F. Li; Y. Chen; Q. Qi; Y. Wang; L. Yuan; M. Huang; I.E. Elsemman; A. Feizi; E.J. Kerkhoven; **J. Nielsen** (2022) Improving recombinant protein production by yeast through genome-scale modelling using proteome constraints. *Nature Com.* **13**:2969

25. J. Xia; B.J. Sanchez; Y. Chen; K. Campbell; S. Kasvandik; **J. Nielsen** (2022) Proteome allocation change linearly with specific growth rate of *Saccharomyces cerevisiae* under glucose-limitation. *Nature Com.* **13**:2819

26. I. Domenzain; B. Sanchez; M. Anton; E.J. Kerkhoven; A. Millan-Oropeza; C. Henry; V. Siewers; J.P. Morrissey; N. Sonnenschein; **J. Nielsen** (2022) Reconstruction of a catalogie of genome-scale metabolic models with enzymatic constraints using GECKO2.0. *Nature Com.* **13**:3766

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 Com.* 3:1245

2. 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

5. 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 Com.* 5:3083

6. 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

7. 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

11. P. Babaei; S. Shoaei; B. Ji; **J. Nielsen** (2018) Challenges in modeling the human gut microbiome. *Nature Biotechnol.* **16**:682-686

12. J.L. Robinson; A. Feizi; M. Uhlen; **J. Nielsen** (2019) A systematic investigation of the malignant functions and diagnostic potential of the cancer secretome. *Cell Rep.* **10**:2622-2635

13. A. Nilsson; E. Björnson; M. Flockhart; F.J. Larsen; **J. Nielsen** (2019) Complex I is bypassed during high intensity exercise. *Nature Com.* **10**:5072

14. J.L. Robinson; P. Kocabas; H. Wang; P.-E. Cholly; D. Cook; A. Nilsson; M. Anton; R. Ferreira; I. Domenzain; V. Billa; A. Limeta; A. Hedin; J. Gustafsson; E.J. Kerkhoven; L.T. Svensson; B.O. Palsson; A. Mardinoglu; L. Hansson; M. Uhlen; **J. Nielsen** (2020) An Atlas of Human Metabolism. *Science Signal.* **13**:eaaz1482

15. A. Nilsson; J.R. Haanstra; M. Engqvist; A. Gerding; B.M. Bakker; U. Klingmüller; B. Teusink; **J. Nielsen** (2020) Quantitative analysis of amino acid metabolism in liver cancer links glutamate excretion to nucleotide synthesis. *Proc. Nat. Acad. Sci. USA* **117**:10294-10304

16. J. Geng; B. Ji: G. Li; F. Lopez-Isunza; **J. Nielsen** (2021) CODY enables quantitatively spatiotemporal predictions on in vivo gut microbial variability induced by diet-intervention. *Proc. Nat. Acad. Sci. USA* **118**:e2019336118

17. H. Wang; J.L. Robinson; P. Kocabas; J. Gustafsson; M. Anton; P.-E. Cholley; S. Huang; J. Gobom; T. Svensson; M. Uhlen; H. Zetterberg; **J. Nielsen** (2021) Genome-scale metabolic network reconstruction of model animals as a platform for translational research. *Proc. Nat. Acad. Sci. USA* **118**:e2102344118

Reviews

1. 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

4. 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

6. **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**:1156-1168

9. A. Mardinoglu; J. Boren; U. Smith; M. Uhlen; **J. Nielsen** (2018) Systems biology in hepatology: Approaches and applications *Nature Rev. Gastro. Hep.* **15**:365-377

10. Y. Zhou; E. Kerkhoven; **J. Nielsen** (2018) Barriers and opportunities in bio-based production of hydrocarbons. *Nature Energy* **3**:925-935

11. M. Kumar; B. Ji; K. Zengler; **J. Nielsen** (2019) Modeling approaches for studying the gut microbiota. *Nature Microbiol.* **4**:1253-1267

12. Z. Liu; K. Wang; Y. Chen; T. Tan; **J. Nielsen** (2020) Third-generation biorefineries as a mean to produce fuels and chemicals from CO_2. *Nature Cat.* **3**:274-288

13. H. Lu; E.J. Kerkhoven; **J. Nielsen** (2022) Multiscale models quantifying yeast physiology: towards a whole-cell model. *Trends Biotechnol.* **40**:291-305

14. X. Tan; **J. Nielsen** (2022) The integration of bio-catalysis and electrocatalysis to produce fuels and chemicals from carbon dioxide. *Chem. Soc. Rev.* **51**:4753

15. **J. Nielsen**; C.B. Tillegreen; D. Petranovic (2022) Innovation trends in industrial biotechnology. *Trends Biotechnol.*, in press

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.* **36**;1233

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* **572**:184-185
14. **J. Nielsen** (2022) Bioactive metabolites: The double-edged sword in your food. *Cell* **185**:4469-4471

Complete List of Publications

Research papers in international journals with peer review

1. K. Nikolajsen; **J. Nielsen**; J. Villadsen (1988) In-line flow injection analysis for monitoring lactic acid fermentations. *Anal. Chim. Acta* 214:137-145
2. **J. Nielsen**; K. Nikolajsen; J. Villadsen (1989) FIA for on-line monitoring of important lactic acid fermentation *variables. Biotechnol. Bioeng.* 33:1127-1134
3. **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
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
5. 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
6. 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
9. K. Nikolajsen; **J. Nielsen**; J. Villadsen (1991) Structured modelling of a microbial system 3. Growth on mixed substrates. *Biotechnol. Bioeng.* 38:24-29
10. **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
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
15. 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
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
22. 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
23. S. Benthin; **J. Nielsen**; J. Villadsen (1993) Transport of sugars via two anomer-specific sites on mannose-phosphotransferase 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
25. 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
26. 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 ^{85}Kr for quantification of gas-liquid mass transfer in bioreactors. *Chem.Eng. Sci.* 49:803-810
29. 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

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30. W. Vongsangnak; **J. Nielsen** (2009) Bioinformatics and systems biology of *Aspergillus*. Pp. 61-84. In: *Aspergillus*. Molecular Biology and Genomics. Eds. M. Machida and K. Gomi. Caister Academic Press, UK

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36. **J. Nielsen** (2010) Developing appropriate hosts for metabolic engineering. Pp. V.1-V.8. In: The Metabolic Pathway Engineering Handbook. Ed. C. D. Smolke. CRC Press, Boca Raton, USA

37. K. R. Patil; P. M. Bapat; **J. Nielsen** (2010) Structure and flux analysis of metabolic networks. Pp. 17.1-17.18. In: The Metabolic Pathway Engineering Handbook. Ed. C. D. Smolke. CRC Press, Boca Raton, USA

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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

42. W. Vongsangnak; **J. Nielsen** (2013) Systems biology methods and developments of filamentous fungi in relation to the production of food ingredients. Chap. 2. In Microbial production of food ingredients, enzymes and nutraceuticals. Eds. B. McNeil, D. Archer, I. Giavasis and L. Harvey, Woodhead Publishing, Cambridge, UK

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

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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

47. M. Huang; H. Joensson **J. Nielsen** (2018) High-throughput microfluidics for screening of yeast libraries. Methods Mol. Biol. **1671**:307-317

48. Q. Liu; T. Yu; K. Campbell; **J. Nielsen**; Y. Chen (2018) Modular pathway rewiring of yeast for amino acid production. Meth. Enz. **608**:417-439

49. Y. Chen; G. Li; **J. Nielsen** (2019) Genome-scale metabolic modeling from yeast to human cell models of complex diseases: Latest advances and challenges. *Methods Mol. Biol.* **2049**:329-345

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

2. J. Villadsen; **J. Nielsen** (1990) Modelling of fermentation kinetics. pp. 259-266. Proc. V'th European Congress on Biotechnology, Lyngby

3. **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,

5. **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

6. 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

10. A. G. Pedersen; **J. Nielsen**; J. Villadsen (1993)Characterization of bioreactors using isotope techniques. pp. 931-934. In Progress in Biotechnology, Vol. 9. Proc. VI'th European Congress on Biotechnology, Florence. Elsevier

11. **J. Nielsen** (1994) Physiological Engineering - Towards a new science. pp. 30-38. In Proc. The 1994 IChemE Research Event, London, Vol. I

12. M. Carlsen; A. Spohr; R. Mørkeberg; **J. Nielsen**; J. Villadsen (1994) Growth and protein formation of recombinant Aspergillus: Utility of morphological characterization by image analysis. pp. 197-202. In Proc. Advances in Bioprocess Engineering, Cuernavaca. Kluwer Academic Publishers

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

16. 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

18. **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

20. 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
5. **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
10. 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)
6. 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)
11. 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)
20. 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)
30. 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, 4th 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, 35th R^3 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 106th General Meeting, Orlando, USA (2006)
74. 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)
96. Integrated analysis of yeast metabolism, 61st Annual Symposium on Cancer Research: Systems Biology of Cancer, Houston, USA (2008)
97. The metabolic networks of Aspergilli₁, 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, 9th 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, 3rd International Conference on Biomolecular Engineering, San Fransisco, USA (2011)
116. Engineering of the Biocatalyst in Biorefineries, 3rd 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 www.aiche.org/sbe/)
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, 11th 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. 27th International Conference on Yeast Genetics and Molecular Biology, Levico Terme, Italy (2015)
173. Global regulation of yeast metabolism. 27th 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 Constraint Based Reconstructon 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. 13th 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. 12th 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. 14th 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. 6th 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 1st 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)
216. Entrepreneurship in Biotechnology. Danish Biotechnology Conference 14, Munkebjerg, Denmark (2019)
217. Systems Biology of Yeast Metabolism. Emerging Applications of Microbes, VIB Conferences, Leuven, Belgium (2019)
218. Synthetic Biology of Yeast. XXIX International Conference on Yeast Genetics and Molecular Biology, Gothenburg, Sweden (2019)
219. Metabolic Engineering of Yeast. Metabolic Engineering Summit 2019, Tianjin, China (2019)
220. Synthetic Biology of Yeast. Green Manufacturing International Conference, Beijing, China (2019)
221. Systems Biology of Metabolism: Role in Production of Advanced Biofuels, Obesity and Cancer. James E. Bailey Award lecture, AIChE Annual Meeting, Orlando, USA (2019)
222. Systems Biology of Metabolism. Trumping the Trumps. Symposium in honor of Prof. Hans Westerhof. Free University of Amsterdam, The Netherlands (2020)
223. The power of microbes. Global Summit, Hello Tomorrow, Paris (2020)
224. Synthetic Biology of yeast. Biocatalysis Open Day 2020, Virtual (2020)
225. Systems Biology of Metabolism. 7th Conference on Constraint Based Reconstruction and Analysis. IMES/AIChE, Virtual (2021)
226. Metabolic Engineering of Yeast. Symposium on Synthetic Biology and Natural Product Biosynthesis, Chinese Academy of Chinese Medical Sciences, Beijing, China (2021)
227. Engineering of yeast for production of food ingredients. International Summit Forum on Future Food and Biotechnology 2021, Wuxi, China (2021)
228. Metabolic Engineering of Yeast. 43rd Symposium on Biomaterials, Fuels and Chemicals, SIMB, Virtual (2021)
229. From Science to Market. Metabolic Engineering 14, Viirtual (2021)
230. Systems Biology of Yeast Metabolism. Metabolic Engineering 14, Virtual (2021)
231. Systems Biology of Yeast Metabolism. 61st meeting of Italian Society for Biochemistry and Molecular Biology, Viirtual (2021)
232. Metabolic engineering of yeast. Brazilian Conference on Biotechnology and Bioengineering. Virtual (2021)
233. Synthetic Biology of Yeast for Production of Food Ingredients. 2021 MiFFI, Copenhagen, Denmark (2021)
234. Systems Biology of Yeast Metabolism. Major Ideas in Quantitative Biology, Copenhagen, Denmark (2022)
235. Systems Biology of Metabolism. EMBO Annual Conference, Heidelberg, Germany (2022)
236. BioInnovation Institute. MiXii Conference, Jerusalem, Israel (2022)
237. Innovation trends in metabolic engineering. ME13, Singapore (2023)
238. Systems biology of yeast metabolic. European Congress on Chemical Engineering, Berlin, Germany (2023)
239. Metabolic engineering of yeast. Korean Society for Biotechnology and Bioengineering Fall Meeting, Busan, Korea (2023)

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)
10. 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)
14. 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)
19. 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 Metabolismı, 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)
53. 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)
74. 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)
76. 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)
96. 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)
131. Systems biology of yeast metabolism. Steve Fest, University of Cambridge, Cambridge, UK (2019)
132. Systems Biology of Yeast Metabolism. Peiyang Lecture, Tianjin University, Tianjin, China (2019)
133. Metabolic Engineerin of Yeast. Nankai University, Tianjin, China (2019)
134. How studying metabolism can impact production of biofuels and identifying novel cancer biomarkers. PhD student Day, Department of Biology, University of Copenhagen, Denmark (2019)
135. Systems Biology of Metabolism. NYU School of Medicine, Institute for Systems Genetics, USA (2020)
136. Systems Biology: A Driver for Metabolic Engineering. Department of Chemical and Biomolecular Engineering, KAIST, South Korea (2020)
137. Systems biology of human metabolism. Department of Chemical and Biomolecular Engineering, KAIST, South Korea (2020)
138. Systems Biology of Yeast Metabolism. Unviersity of Texas, Virtual (2021)
139. Systems Biology of Yeast. Pacific Northern National Laboratory, Virtual (2021)
140. Systems biology of yeast metabolism. NNF Center for Biosustainability annual meeting, Elsinore, Denmark (2021)
141. Life Science Innovation. NNF Center for Biosustainability, DTU, Lyngby, Denmark (2021)

142. Systems biology of Human metabolism. FEBS Course, Stockholm, Sweden (2022)
143. Systems Biology of Metabolism. Sahlgrenska Academy, Gothenburg, Sweden (2023)
144. Systems Biology of Metabolism. Center for Basic Metabolic Research, University of Copenhagen, Denmark (2023)
145. Innovation trends in industrial biotechnology. KAIST, Daejon, Korea (2023)
146. Life science innovation. Center for Basic Metabolic Research, University of Copenhagen, Denmark (2023)

List of Conferences co-organized

Chair/Co-Chair of Organizing Committee *(not complete)*

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**
14. Copenhagen Bioscience Conference on Biosustainability, Hilleröd, Denmark (2015) (150 participants). **Chair**
15. Copenhagen Bioscience Conference on Biosustainability, Hilleröd, Denmark (2019) (150 participants) **Chair**

Member of Organizing Committee *(not complete)*

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. 2nd 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. 35th 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 *(not complete)*

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. 12th 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. 10th European Conference on Fungal Genetics, Leiden, The Netherlands (2010)
21. 14th International Biotechnology Symposiumand 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

Current Post Doctoral Researchers

1. Peishun Li, Chalmers (2022-)

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. Yi Liu, Chalmers (2015-2020)
82. JinHo Kim, Chalmers (2016-2018)
83. Manish Kumar, Chalmers (2015-2018)
84. Petter Holland, Chalmers (2016-2018)
85. Sylvain Prigent, Chalmers (2015-2018)
86. Ibrahim El-Semman, DTU (2015-2018)
87. Francesca Di Bartolomeo, Chalmers (2017-2019)
88. Lucy Fang-I Chao, Chalmers (2017-2019)
89. Zhiwei Zhu, Chalmers (2014-2019)
90. Tao Yu, Chalmers (2014-2019)
91. Tyler Doughty, Chalmers (2017-2019)
92. Ling-Qun Ye, Chalmers (2017-2019)
93. Yeping Zhang, BUCT (2017-2019)
94. Kate Campbell, Chalmers (2016-2020)
95. Jonathan Robinson, Chalmers (2016-2020)
96. Rui Pereira, Chalmers (2016-2020)
97. Xiaowei Li, Chalmers (2016-2020)
98. Quanli Liu, Chalmers (2016-2020)
99. Daniel Cook, Chalmers (2017-2020)
100. Ievgeniia Tiukova, Chalmers (2018-2020)
101. Hongzhong Lu, Chalmers (2017-2020)
102. Pinar Kocabas, Chalmers (2017-2020)
103. Jun Geng, Chalmers (2015-2020)
104. Jiufu Qin, Chalmers & DTU (2015-2020)
105. Boyang Ji, Chalmers (2013-2020)
106. Yiming Zhang, BUCT (2016-2021)
107. Rosemary Yu, Chalmers (2017-2021)
108. Hao Wang (2017-2024)
109. Sinisa Bratulic, Chalmers (2018-2022)
110. Yu Chen, Chalmers (2018-2022)
111. Rasool Saghaleyni, Chalmers (2021-2022)
112. Feiran Li, Chalmers (2021-2022)
113. Yu Chen, Chalmers (2018-2023)
114. Rasool Saghaleyni, Chalmers (2021-2023)
115. Feiran Li, Chalmers (2021-2023)

Current PhD Students (main supervisor)

1. Angelo Limeta, Chalmers (2019-)
2. Mihail Petre Anton, Chalmers (2021-)

Graduated PhD Students (main supervisor)

1. Henrik Jørgensen, DTU (1991-1993)
2. Claus Lindvad Johansen, DTU (1991-1993)
3. Morten Carlsen, DTU (1992-1995)
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5. Anders Spohr, DTU (1993-1996)
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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. Alexandra Bergman, Chalmers (2013-2019)
80. Avlant Nilsson, Chalmers (2014-2019)
81. Benjamín José Sánchez Barja, Chalmers (2014-2019)
82. David Bergenholm, Chalmers (2014-2020)
83. Parizad Babaei, Chalmers (2015-2019)
84. Promi Das, Chalmers (2015-2019)
85. Raphael Ferreira, Chalmers (2015-2019)
86. Gang Li, Chalmers (2016-2020)
87. Simonas Marcišauskas, Chalmers (2015-2020)
88. Christoph Börlin, Chalmers (2016-2020)
89. Rasool Saghaleyni, Chalmers (2016-2021)
90. Carl Melina, Chalmers (2016-2021)
91. Ning Qin, BUCT (2016-2021)
92. Qi Qi, Chalmers (2017-2021)
93. Feiran Li, Chalmers (2017-2021)
94. Yijin Zhao, BUCT (2017-2021)
95. Peishun Li, Chalmers (2018-2022)
96. Johan Gustafsson, Chalmers (2017-2022)
97. Hao Lou, Chalmers (2018-2022)
98. Dimitra Lappa, Chalmers (2016-2023)
99. Lingyun Li, BUCT (2018-2023)
100. Juan Octavo Valle (2012-2023)
101. Ivan Domenzain Del Castillo Cerecer (2017-2023)

Graduated PhD Students (Examiner)

1. Joachim Almquist, FCC, Sweden (2010-2017)
2. Yasaman Dabirian, Chalmers (2016-2021)
3. Oliver Konzock, Chalmers (2018-2022)
4. Christos Skrekas, Chalmers (2018-2022)
5. Maximillian Otto, Chalmers (2018-2022)
6. Dany Liu, Chalmers (2019-2023)
7. Marta Tous Mohedano, Chalmers (2019-2023)

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)
16. Yating Hu, Chalmers (2015-2019)

17. Elias Björnson, Gothenburg University (2014-2021)
18. John Hellgren, Chalmers (2017-2022)

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 Univesity 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. Zeinab Hefny, Katholiek University of Leuven, Belgium (2017-2019)

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. Verena Siewers, Senior Researcher & Docent, DTU & Chalmers (2006-2020)
13. Yun Chen, Resarcher & Docent, Chalmers (2008-2020)
14. Marie Nordqvist, Research Engineering and Lab Manager (2008-2017)
15. Marie-Louise Wennerhag, Financial Officer, Chalmers (2008-2018)
16. Martina Butorac (2008-2020)
17. Malin Nordvall, Research Engineer, Chalmers (2009-2014)
18. Stefan Rokem, Visiting Professor, Chalmers (2010)
19. Pegah Khorramzadeh, Research Engineering, Chalmers (2010-2011)
20. Sergio Bordel Velasco, Assistant Professor (2010-2014)
21. Suwanee Jansa-Ard, Research Engineer, Chalmers (2011-2014)
22. Martin Markström, Co-Director AoA, Chalmers (2011-2014)
23. Ximena Rozo Sevilla, Research Engineer, Chalmers (2011-2015)
24. Danilo Porro, Visiting Professor, Chalmers (2012)
25. Emma Ribbenhed, Research Engineer, Chalmers (2013-2015)
26. Antonio Marras, Research Assistant Chalmers (2013-2015)
27. Eduard Kerkhoven, Researcher, Chalmers (2013-2020)

28. Shaghayegh Hosseini, Data Manager, Chalmers (2013-2019)
29. Gheorge Manuel Borja Zamfir, PhD student, DTU (2013-2019)
30. Brian Pfleger, Visiting Professor, Chalmers (2014)
31. Julia Karlsson, Research Engineer, Chalmers (2014-2016)
32. Matthias Nilsson, Research Engineer, Chalmers (2015-2016)
33. Daniel Hermansson, Research Engineer, Chalmers (2016)
34. Xiaojun Ji, Visiting Researcher (2016-2017)
35. Jianye Xia, Visiting Professor, Chalmers (2016-2017)
36. Liming Quyang, Visiting Professor, Chalmers (2016-2017)
37. Takayoshi Fujii, Visiting Researcher, Chalmers (2016-2018)
38. Fredrik Schubert, Chalmers (2016-2019)
39. Joakim Norbeck, Researcher & Docent, Chalmers (2015-2020)
40. Johan Björkeroth, PhD student, Chalmers (2016-2020)
41. Erica Dahlin, Chalmers (2008-2020)
42. Angelica Ardehed (Lab Manager), Chalmers (2016-2020)
43. Emilie Lindquist, Chalmers (2017-2020)
44. Pierre-Etienne Cholley, Chalmers (2017-2020)
45. Virinchi Billa, Chalmers (2017-2019)
46. Mihail Anton, Chalmers (2017-2020)
47. Felipe Lopez-Isunza, Visiting Professor, Chalmers (2019)