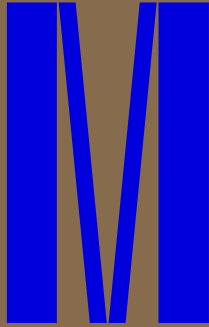


MASARYK
UNIVERSITY
DOCTOR
HONORIS
CAUSA



Jakub Tolar
Frank Mittelbach

PROGRAMME OF THE CEREMONY

To the accompaniment of a fanfare, the following academic dignitaries will take their places in the auditorium in order:

members of the scientific councils of MU

Deans of MU and their representatives

Vice-rectors of MU

Rectors and other representatives of universities

promoter Tomáš Kašpárek

promoter Petr Sojka

Martin Repko for Faculty of Medicine MU

Jiří Barnat for Faculty of Informatics MU

Jakub Tolar, doctor honoris causa in spe

Frank Mittelbach, doctor honoris causa in spe

moderating Vice-Rector Jiří Hanuš

Rector Martin Bareš

The anthems of the Czech Republic, the European Union, the United States of America and the Federal Republic of Germany will be played.

Jiří Hanuš will take over the opening ceremony.

Martin Repko will introduce Jakub Tolar.

Jiří Barnat will introduce Frank Mittelbach.

Jiří Hanuš will ask the Rector for approval to continue with the ceremony.

Rector Bareš speech and his approval.

Reading of the graduation vows.

Graduation of Jakub Tolar.

Speech of the new Honorary Doctor of MU.

Graduation of Frank Mittelbach.

Speech of the new Honorary Doctor of MU.

Musical performance by Vladimír Richter with piano accompaniment by Petr Hala.

Jiří Hanuš will close the ceremony.

Academic dignitaries leave the auditorium to a fanfare.



JAKUB TOLAR

JAKUB TOLAR

Born on June 2, 1966, in Prague,
Czechoslovakia.

RESEARCH FOCUS

Blood and marrow transplantation, treatment of stem cell failure syndromes, metabolic disorders, and connective tissue disorders.

EDUCATION

2000–2003

University of Minnesota Medical Center, Pediatric Hematology-Oncology/Blood & Marrow Transplantation (Fellow)

1997–2000

University of Minnesota Medical Center (Pediatric Resident)

1996–1997

University of Minnesota, Institute of Human Genetics (Postdoctoral Fellow)

1992–1996

University of Minnesota, Molecular, Cellular & Developmental Biology and Genetics (PhD)

1984–1990

Charles University, 1st Medical School (MD, summa cum laude)

WORK EXPERIENCE

Since 2018

Vice President for Clinical Affairs, University of Minnesota Medical School

Since 2017

Dean, University of Minnesota Medical School

Since 2003

University of Minnesota Medical School, Department of Pediatrics

Since 2003

Attending Physician, Pediatric Bone Marrow Transplant, M Health Fairview Masonic Children's Hospital

1990–1992

Assistant Professor, Charles University, Department of Anatomy

SELECTED AWARDS

2022

Team Telomere Award for Excellence in Medicine

2015

Distinguished McKnight University Professorship

2014

Innovator in Translational Research Award, Pediatric Faculty Recognition

2013

Rare Disease Research Hall of Fame, National Organization for Rare Disorders

2013–2021

Edmund Wallace Tulloch and Anna Marie Tulloch Chair in Stem Cell Biology, Genetics and Genomics

2011–2013

Albert D. and Eva J. Corniea Chair

2009

Butterfly Award, Children's Cancer Research Fund

2006–2010

American Heart Association, Scientist Development Award

SELECTED REQUESTED LECTURES

2024

Legacy impact of BMT on EB." 53rd Annual European Society for Dermatological Research meeting, Lisbon, Portugal.

2024

World Congress on Rare Skin Disease, Paris, France.

2023

"Be Prepared..." Research the Cure webinar.

2023

“EB Therapeutics: Lessons from stem cell biology and transplantation.” International EB Symposium, Osaka, Japan, Virtual.

2022

“Embracing our aging world.” 3rd Vietnam National Geriatric Conference, Hanoi, Vietnam.

2022

“Reaping Mendel’s Harvest: Genome editing and the era of precision medicine.” Mendel’s 200th Birthday Celebration, Brno, Czech Republic.

2022

“Being able to cure EB, or treat but not cure EB; that is the question?” European Society of Dermatology Research (ESDR) Kitchen. “Sweet and Sour” debate with Dr. John McGrath. Webinar, London, England.

2021

“Vaccination: Lessons learned from the roll out in MN and national planning in Cuba: Minnesota Vaccines, variants, and cases.” University of Minnesota-Cuba COVID-19 Forum, Virtual.

2020

“Containing COVID-19 in Minnesota, UMN’s Role.” University of Minnesota- Cuba COVID-19 Forum, Virtual.

“Combining Approaches: BMT and systemic treatment,” EB2020, London, United Kingdom.

SELECTED SCIENTIFIC ACTIVITIES

Since 2019

American Association for the Advancement of Science

Since 2017

Association of American Medical Colleges

Since 2017

Association of Academic Health Centers

Since 2017

Royal Society of Medicine, Overseas Fellow

Since 2017

New York Academy of Sciences

Since 2016

St. John's Dermatological Society, London, England
(invited member)

Since 2016

American Society of Transplantation

Since 2015

Pediatric Dermatology Research Alliance (PeDRA)

MEMBERSHIP IN EDITORIAL BOARDS

Since 2016

Blood Advances

2015–2017

Journal of Stem Cell Research & Therapeutics

2014–2016

Transplantation, Associate Editor

Since 2013

American Journal of Dermatology

Since 2012

PLoS ONE, Associate Editor

Since 2012

F1000Prime, Regenerative Medicine Section

Since 2010

Faculty of 1000, Non-Hematopoietic Stem Cells Evaluation
Board

2010–2018

Biology of Blood and Marrow Transplantation

SELECTED PUBLICATIONS

McGrath JA, **Tolar J**. New gene therapies for dystrophic epidermolysis bullosa: progress, promise, and persistent gaps. *Br J Dermatol*. 2025 Aug 13:ljaf321. doi: 10.1093/bjd/ljaf321. Epub ahead of print. PMID: 40799143.

Lee CAA, Wu S, Chow YT, Kofman E, Williams V, Riddle M, Eide C, Ebens CL, Frank MH, **Tolar J**, Hook KP, AIDubayan SH, Frank NY. Accelerated Aging and Microsatellite Instability in Recessive Dystrophic Epidermolysis Bullosa-Associated Cutaneous Squamous Cell Carcinoma. *J Invest Dermatol*. 2024 Jul. doi: 10.1016/j.jid.2023. 11. 025. PMID: 38272206.

Wang C, Gu C, Popp C, Vashisth P, Mustfa SA, Martella DA, Spiteri C, McLennan S, Sun N, Riddle M, Eide CR, Parsons M, **Tolar J**, McGrath JA, Chiappini C. Integrating Porous Silicon Nanoneedles within Medical Devices for Nucleic Acid Nanoinjection. *ACS Nano*. 2024 May 10. <https://doi.org/10.1021/acsnano.4c00206>. PMID: 38726598. Epub ahead of print.

Liu D, **Tolar J**... Efficient site-specific integration of large genes in mammalian cells via continuously evolved recombinases and prime editing. *Nat Biomed Eng*. 2024 May 9. Accepted.

Osborn MJ...**Tolar J**...Twin prime editing mediated exon skipping/reinsertion for restored collagen VII expression in recessive dystrophic epidermolysis bullosa. *J Invest Dermatol*. 2024 April 26. Accepted.

Stone W, Strege C, Miller W, Geurts AM, Grzybowski M, Riddle M, Lees C, Eide C, Keene DR, Tufa SF, Seelig D, McGrath J, **Tolar J**. Creation and characterization of novel rat model for recessive dystrophic epidermolysis bullosa: Frameshift mutation of the Col7a1 gene leads to severe blistered phenotype. PLoS One. 2024 May 9;19(5):e0302991. <https://doi.org/10.1371/journal.pone.0302991>. PMID: 38722855. PMCID: PMC11081381.

Strege C, Miller WC, Eide C, Hubbard J, **Tolar J**. Methods for decreasing preweaning mortality in a fragile mouse model of hypomorphic collagen VII deficiency. Compar Med. 2024 Mar 20;74(2):99-104. <https://doi.org/10.30802/AALAS-CM-23-000087>. PMID: 38508685. PMCID: PMC11078276.

Saha A, Palchaudhuri R, Lanieri L, Hyzy S, Riddle MJ, Panthera J, Eide C, **Tolar J**, Panoskaltsis-Mortari A, Gorfinkel L, Tkachev V, Gerdemann U, Alvarez-Calderon F, Palato ER, MacMillan ML, Wagner JE, Kean LS, Osborn M, Kiem HP, Scadden DT, Olson LM, Blazar BR. Allo-engraftment without significant toxicity or GVHD in CD45 antibody-drug conjugate conditioned Fanconi anemia mice. Blood. 2024 Mar 6: blood.2023023549. <https://doi.org/10.1182/blood.2023023549>. PMID: 38447038. Epub ahead of print.

Lee CAA, Wu S, Chow YT, Kofman E, Williams V, Riddle M, Eide C, Ebens CL, Frank MH, **Tolar J**, Hook KP, AIDubayan SH, Frank NY. Accelerated aging and microsatellite instability in recessive dystrophic epidermolysis bullosa-associated cutaneous squamous cell carcinoma. J Invest Dermatol. 2024 Jan 23: S0022-202X(24)00022-8. <https://doi.org/10.1016/j.jid.2023.11.025>. PMID: 38272206. Epub ahead of print.

Doman JL, Pandey S, Neugebauer ME, An M, Davis JR, Randolph PB, McElroy A, Gao XD, Raguram A, Richter MF, Everette KA, Banskota S, Tian K, Tao YA, **Tolar J**, Osborn MJ, Liu Dr. Phage-assisted evolution and protein engineering yield compact, efficient prime editors. *Cell*. 2023 Aug 31;186(18):3983-4002.e26.

<https://doi.org/10.1016/j.cell.2023.07.039>.

PMID: 37657419. PMCID: PMC10482982.

Feser CJ, Williams JM, Lammers DT, Bingham JR, Eckert MJ, **Tolar J**, Osborn MJ. Engineering human cells expressing CRISPR/Cas9-synergistic activation mediators for recombinant protein production. *Int J Mol Sci*. 2023 May 9;24(10):8468.

<https://doi.org/10.3390/ijms24108468>. PMID: 37239814.

PMCID: PMC10218281.

Dieter K, Niebergall-Roth E, Daniele C, Fluhr S, Frank NY, Ganss C, Kiritsi D, McGrath JA, **Tolar J**, Frank MH, Kluth MA. ABCB5+ mesenchymal stromal cells facilitate complete and durable wound closure in recessive dystrophic epidermolysis bullosa. *Cytotherapy*. 2023 Jul;25(7):782-788.

<https://doi.org/10.1016/j.jcyt.2023.01.015>.

PMID: 36868990. PMCID: PMC10257763.

Ramos TL, Bolivar-Wagers S, Jin S, Thangavelu G, Simonetta F, Lin PY, Hirai T, Saha A, Koehn BH, L Su L, Picton LK, Baker J, Lohmeyer JK, Riddle MJ, Eide C, **Tolar J**, Panoskaltsis-Mortari A, Wagner JE, Garcia KC, Negrin RS, Blazar BR. Prevention of acute GVHD disease using an orthogonal IL-2/IL-2R β system to selectively expand regulatory T-cells in vivo. *Blood*. 2023 Mar 16;141(11):1337-52.

<https://doi.org/10.1182/blood.2022018440>.

PMID: 36564052. PMCID: PMC10082364.

Mehta PA, **Tolar J**. “Fanconi Anemia.” Initial posting February 14, 2002; Last revision March 8, 2018. In: Pagon RA, Adam MP, Ardinger HH, et al., editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993–2016.

Osborn M, **Tolar J**. “Cellular Engineering and Disease Modeling with Gene-Editing Nucleases.” *Advances in Experimental Medicine and Biology*, Vol. 895, Genome Editing: The Next Step in Gene Editing. Hirsch M, Cathomen T, Porteus, M, eds. Springer, 2016.

Tolar J. “Novel Stem Cell Treatment Options.” *Fanconi Anemia: Guidelines for Diagnosis and Management*. Frohn-mayer D, Frohn-mayer L, Guinan E, Kennedy T, Larsen K, eds. 4th ed. Fanconi Anemia Research Fund, 2015.

Agarwal S, Boulad F, Davies S, Dietz A, **Tolar J**. “Hematopoietic Cell Transplantation for “Dyskeratosis Congenita.” In CCCTAA Consortium Guidelines: Dyskeratosis Congenita and Telomere Biology Disorders: Diagnosis and Management Treatment Guidelines, Savage S and Cook E, eds. First Edition 2015.

Tolar J, Osborn MJ, Daughters R, Banga A, Wagner J. “Regenerative Medicine: Multipotential Cell Therapy for Tissue Repair.” *Williams Hematology 9E*, 9th Edition. Kaushansky K, Lichtman M, Prchal J, Levi MM, Press O, Burns L, Caligiuri M, eds. McGraw-Hill Education 2015.

Tolar J. “Translating Genome Engineering to Survival.” *Translating Gene Therapy to the Clinic*. Laurence J, Franklin M, eds. Elsevier Inc. 2015.

Wagner JE, **Tolar J**, Auerbach AD, MacMillan ML. “Hematopoietic Cell Transplantation for Fanconi Anemia.” *Thomas' Hematopoietic Cell Transplantation, Fifth Edition*. Appelbaum FR, Forman SJ, Negrin RS, Blume KG, eds. Blackwell Publishing, Wiley 2015.

Tolar J, Le Blanc K, Blazar BR. "MSCs for Graft-Versus-Host Disease." Mesenchymal Stromal Cells: Biology and Clinical Applications. Hematti P, Keating A, eds. Humana Press, Springer 2013.

Tolar J, Blazar BR, Wagner JE. "Bone marrow transplantation for recessive dystrophic epidermolysis bullosa." Fitzpatrick's Dermatology in General Medicine. Wolff K, Goldsmith LA, Katz SI, Gilchrest BA, Paller AS, Leffell DJ, eds. AccessMedicine, McGraw-Hill 2011.

Tolar J, Le Blanc K, Blazar BR. "Mesenchymal stromal cells for graft versus host disease." Mesenchymal stromal cells: Basic Biology & Clinical Applications. Hematti P, Keating A, eds. Springer 2011.

LAUDATIO

Delivered by Martin Repko

Your Magnificence, Mr Rector, Honorabiles, Spectabiles, distinguished members of the scientific councils, distinguished guests, ladies, and gentlemen,

Allow me today to deliver a laudatio to a person who, in an extraordinary way, combines Czech roots, world-class science and the profound human dimension of medicine – to Professor Jakub Tolar, MD, PhD, who is today being awarded an honorary doctorate from Masaryk University.

Professor Jakub Tolar comes from the Czech Republic. He received his medical education at the First Faculty of Medicine of Charles University in Prague, where the foundations of his professional career and his deep relationship with medicine as a vocation were laid. However, early in his career, he demonstrated a determination to cross boundaries – not only geographical, but also intellectual.

After moving to the United States, he continued his scientific training at the University of Minnesota, where he earned a PhD in molecular, cellular and developmental biology and genetics. With this step, he symbolically and practically linked clinical medicine with innovative basic research – a connection that has become a hallmark of his entire career.

Today, he holds extremely important positions at the University of Minnesota: he is Dean of the Faculty of Medicine and Vice-President for Clinical Affairs at the university. In these roles, he is not only responsible for the development of a single research group or clinical facility, but also helps determine the strategy for medical education, scientific direction, and the healthcare system of the entire institution. His work thus goes far beyond the scope of individual scientific work – he participates in shaping the future of academic medicine as such.

Despite these top management positions, Professor Tolar remains primarily a physician. He is a clinically active paediatric haematologist and oncologist and a specialist in haematopoietic cell transplantation. His professional focus includes paediatric haematology-oncology, bone marrow transplantation and cell and gene therapies for rare genetic diseases.

This is where the focus of his scientific contribution lies. Professor Tolar has made a significant contribution to the development of treatments for children suffering from diseases that until recently were considered incurable. His research has shown that combining bone marrow transplantation with knowledge of molecular genetics can fundamentally change the prognosis for patients with serious hereditary disorders – for example, in certain devastating skin diseases, where haematopoietic cell transplantation has opened a new therapeutic pathway.

His work is an example of true translational medicine in the best sense of the word: from laboratory discovery to the patient's bedside – and back again. In his hands, scientific knowledge is not an end in itself; it becomes a concrete hope for children and their families.

On an international scale, Professor Jakub Tolar is considered an authority in the field of paediatric haematology and cell therapies. His publications are widely cited, and his clinical approaches are used in research and health-care centres around the world. He is invited to speak at prestigious professional forums and participates in shaping a field that is fundamentally transforming modern medicine.

His personality has a special dimension for the Czech Republic. His life story is a powerful and inspiring tale of how Czech medical education can be a solid foundation for a global scientific career. In his speeches and interviews for the Czech media, he repeatedly expresses his

relationship to the Czech environment and his support for the young generation of doctors and scientists. He represents a bridge between Czech medicine and the global research space – a bridge based on expertise, openness, and shared responsibility for the future of science.

Masaryk University prides itself on combining education, science, and service to society. Professor Tolar embodies these values in an exceptional way. He is a world-class scientist, a physician devoted to his patients and an academic leader who can create an environment for the growth of future generations.

The awarding of an honorary doctorate from Masaryk University to Professor Jakub Tolar is therefore not only a recognition of his extraordinary scientific and clinical achievements, but also an expression of respect for his ability to connect continents, disciplines, and human stories.

Professor Tolar, on behalf of the academic community, allow me to express my deep respect and sincere congratulations. We are honoured to welcome you among the honorary doctors of Masaryk University.

A NOTE OF GRATITUDE

Jakub Tolar

I accept the honorary degree of Doctor Honoris Causa from Masaryk University with deep gratitude and humility. To be recognized by an institution defined by intellectual courage, public service, and scientific excellence is a profound honour.

I am sincerely thankful to Professor Martin Bareš, Rector of Masaryk University, to the Scientific Board, and to the leadership of the Faculty of Medicine for their confidence and generosity. Under Professor Bareš's leadership, Masaryk University has not only preserved its distinguished traditions but has expanded its global impact—advancing biomedical science, strengthening international collaboration, and shaping the future of medical education.

This honour reflects the enduring strength of Masaryk University's academic community and its commitment to progress grounded in purpose. I am privileged to join the community of honorary doctors whose work contributes to this living legacy, and to be associated with a university that consistently translates knowledge into meaningful benefit for society.

I accept this recognition with gratitude, respect, and confidence in the continued momentum of Masaryk University's mission.



Foto: Markus Kohz

FRANK
MITTELBACH

FRANK MITTELBACH

Born on 5 April 1962 in Saarlouis, Germany.

RESEARCH FOCUS

Document engineering; software engineering; digital typography; automation; accessibility.

EDUCATION

1981–1988

Johannes Gutenberg University, Mainz (Dipl. Math. degree)

WORK EXPERIENCE

Since 2020

Technical lead of a multi-year project to automatically produce well-tagged PDF with LaTeX, financially supported by Adobe, USA

2013–2016

Information Systems Architect V, Master; Lead Architect for Service Integration Framework for Enterprise Service Management (ESM) global organization, HP, Bad Homburg, Germany

2010–2013

Information Systems Architect V, Master; Lead Architect for Project Services ESM EMEA, HP, Rüsselsheim, Germany

2007–2009

Senior SE; Technical Lead of EMEA Tools & Automation;
EMEA representative for Service Delivery Architecture
design and evolution on global level, EDS, Rüsselsheim,
Germany

1997–2006

Advanced SE; Technical Lead of EMEA Central Tools &
Automation, EDS, Rüsselsheim, Germany

Since 1989

Technical Lead of LaTeX development, LaTeX Project

1988–1996

Systems Engineer Software, EDS, Rüsselsheim, Germany

SELECTED AWARDS

2016

ACM Best Paper Award for *A general framework for
globally optimized pagination* presented at DocEng '16,
Vienna, Austria

2005

Promotion to “Distinguished SE (Systems Engineer)”, a
selected group of technologists within Electronic Data
Systems (EDS), Dallas, USA

1991

Research Grant under the European Research Program of
Digital Equipment Corporation (DEC)

1989

Donald Knuth Scholarship, Stanford, USA

1980

Studienstiftung des Deutschen Volkes, Germany

SELECTED REQUESTED LECTURES

2025

Invited talk at the PDF Days Europe 2025 conference, Berlin, Germany

2024

Invited talk at the Informatics Colloquium of the Faculty of Informatics, Masaryk University, Brno

2024

Keynote at the ACM Symposium on Document Engineering 2024. San Jose, USA

2022

Invited talk at the PDF Days Europe 2022 conference, Berlin, Germany

2019

Feasibility study & workshop, SBS Swiss Library for the Blind, Visually Impaired, and Reading Disabled, Zürich, Switzerland

2016, 2024

Workshop invitations, Sonderforschungsbereich CROSSING, Technical University Darmstadt, Germany

1997, 2000

Invited speaker at the International Symposium on “Multilingual Information Processing” in Tsukuba/Tokyo (Japan)

SELECTED SCIENTIFIC ACTIVITIES

Since 2020

Member of technical working groups, ISO and PDF Association

Since 2019

Member of the board, International Gutenberg Society, Mainz, Germany

Since 2017

Member of the board of directors, TeX Users Group, USA

MEMBERSHIP IN EDITORIAL BOARDS

Since 2020

Series editor, Kleine Drucke, International Gutenberg Society, Mainz, Germany

Since 2013

Review board member, DocEng conference series, ACM, New York, USA

Since 1996

Series editor, Tools & Techniques for Computer Typesetting, Addison-Wesley

SELECTED PUBLICATIONS

F. Mittelbach, U. Fischer, D. Carlisle, J. Wright. *MathML and other XML Technologies for Accessible PDF from LaTeX*. ACM Symposium on Document Engineering, DocEng '25, New York, NY, USA, 2025. Association for Computing Machinery.

F. Mittelbach, U. Fischer, D. Carlisle, J. Wright. *Automatically producing accessible and reusable PDFs with LaTeX*. ACM Symposium on Document Engineering, DocEng '24, New York, NY, USA, 2024. Association for Computing Machinery.

F. Mittelbach. *Evolution of LaTeX – Teaching old docs new tricks*. DocEng '24 conference, San Jose, USA, 2024. Association for Computing Machinery.

F. Mittelbach, U. Fischer. *Enhancing LaTeX to automatically produce tagged and accessible PDF*. 5th International Workshop on “Digitization and E-Inclusion in Mathematics and Science” (DEIMS), 2024, Tokyo.

F. Mittelbach with U. Fischer. *The LaTeX Companion 3rd edition, Parts I & II*. Addison-Wesley, Reading, USA, 2023.

F. Mittelbach, U. Fischer, C. Rowley. *LaTeX Tagged PDF Feasibility Evaluation*. 2020. LaTeX Project.

F. Mittelbach, C. Rowley. *LaTeX Tagged PDF—a blueprint for a large project*. TUGboat, 41(3):292–298, 2020.

F. Mittelbach. *A general LuaTeX framework for globally optimized pagination*. Computational Intelligence, 35(2):242–284, 2019.

F. Mittelbach. *Effective floating strategies*. ACM Symposium on Document Engineering, DocEng '17, New York, NY, USA, 2017. Association for Computing Machinery.

F. Mittelbach. *A general framework for globally optimized pagination.* ACM Symposium on Document Engineering, DocEng '16, New York, NY, USA, 2016. Association for Computing Machinery.

F. Mittelbach, W. Robertson. *l3build — A modern Lua test suite for TeX programming.* TUGboat, 35(3):287–293, 2014.

F. Mittelbach. *E-TeX: Guidelines for Future TeX Extensions—revisited.* TUGboat, 34(1):47–63, 2012.

F. Mittelbach. *Reflections on the history of the LaTeX Project Public License A (LPPL)—A software license for LaTeX and more.* TUGboat, 32(1):83–94, 2011.

M. Goossens, **F. Mittelbach,** S. Rahtz, D. Roegel, H. Voß. *The LaTeX Graphics Companion 2nd edition.* Addison-Wesley, Reading, MA, USA, 2008.

F. Mittelbach, M. Goossens. *The LaTeX Companion, 2nd edition.* Addison-Wesley, Reading, MA, USA, 2004. Translated into German and French.

F. Mittelbach. *Formatting documents with floats: A new algorithm for LaTeX2ε.* TUGboat, 21(3):278–290, 2000.

D. Carlisle, C. Rowley, **F. Mittelbach.** *The LaTeX3 Programming Language—a proposed system for TeX macro programming.* TUGboat, 18(4):303–308, 1997.

F. Mittelbach, C. Rowley. *Language information in structured documents: A model for mark-up and rendering.* International Symposium on Multilingual Information Processing, Japan, March 1997. University of Tsukuba.

M. Goossens, S. Rahtz, **F. Mittelbach.** *The LaTeX Graphics Companion: Illustrating Documents with TeX and PostScript.* Addison-Wesley, Reading, MA, USA, 1997. Translated into Russian and Japanese.

C. Rowley, **F. Mittelbach**. Application-independent representation of multilingual text. Tenth International Unicode Conference, Mainz, Germany, San Jose, CA, 1997. The Unicode Consortium.

M. Goossens, **F. Mittelbach**, A. Samarin. *The LaTeX Companion*. Addison-Wesley, Reading, Massachusetts, 1993. Translated into German, Russian, and Japanese.

F. Mittelbach, C. Rowley. The pursuit of quality: How can automated typesetting achieve the highest standards of craft typography? EP92—Proceedings of the International Conference on Electronic Publishing, Document Manipulation, and Typography, Swiss Federal Institute of Technology, Lausanne, 1992, Cambridge University Press.

F. Mittelbach, R. Schöpf. With LaTeX into the nineties. In Barbara Beeton, editor, Annual TUG conference, Stanford University, Stanford, August 1989.

LAUDATIO

Delivered by Jiří Barnat

Your Magnificence, Rector, Honorabiles, Spectabiles, esteemed members of the Scientific Councils, distinguished guests, ladies, and gentlemen,

Allow me to introduce Frank Mittelbach, a world-renowned expert in document engineering and automation, who has led the research and development of the LaTeX system for four decades.

The excellence of Frank Mittelbach in advancing human knowledge is rooted in three key pillars: the pursuit of typographic quality, innovation in document and software engineering, and a commitment to accessibility—thereby ensuring the free dissemination of complex scientific documents across the fields of Science, Technology, Engineering, and Mathematics (STEM).

The Pursuit of Quality

“The Pursuit of Quality” is the title of a seminal paper by a then-young scholar that outlined his vision for achieving the highest standards of master-craft typography through automation. Quality is what has mattered, matters now, and will continue to matter in digital typography, in Computer Science, and in the lives of us all in the 21st century. Frank’s early vision led to his lifelong leadership in the development of LaTeX. For the STEM community, this was a providential decision, the fruits of which authors in technical domains enjoy to this day.

The founders of the Faculty of Informatics were acutely aware of the community’s needs and this pursuit of quality. Consequently, the support and daily use of LaTeX began on day one of the faculty’s existence. LaTeX was employed for all printed outputs and documents generated by the faculty’s information system—including diplomas, timetables, and official correspondence. Most of these technologies, with LaTeX at their core, have persisted for

four decades within the Information System of Masaryk University. LaTeX has also proven indispensable for the high-quality typesetting of admission tests and course examinations—including complex mathematical formulae—as well as the publishing of theses and academic papers. At our Faculty, LaTeX is used in more than 90 per cent of all publications and theses.

Document and Software Engineering

Software engineering is a cornerstone of our Faculty's academic programs. The history of LaTeX's evolution under Frank's leadership—from the 1985 version 2.09 to today's highly sophisticated system capable of generating fully accessible documents—is a fascinating saga of engineering that should serve as an inspiration to every student of Informatics.

While supporting a vast and active user base, Frank analyzed, designed, and implemented changes that successfully evolved a single-file `latex.tex` into a robust, well-documented, structured, open-source, and extensible system. Today, this system sits at the heart of a billion-dollar publishing industry within the STEM domain.

Another aspect of Frank's work merits particular mention: his intuitive understanding of user challenges and his ability to move between different levels of abstraction to design viable solutions. As early as 1995, he lectured at Masaryk University on LaTeX portability, addressing the problems caused by different character encodings. In 2024, he delivered a series of talks here regarding his award-winning results in global page optimization, the development of `expl3`—the modern, high-level programming layer for LaTeX—and his extensive experience in document accessibility.

Accessibility

The primary goal of any technical document is to convey complex semantics—through text, mathematics, tables, and diagrams—to the recipient in a structured manner. LaTeX-generated output in PDF format is among the first systems to truly fulfil this goal. The latest evolution of LaTeX allows users to embed a document's semantic tree structure directly within the PDF, ensuring that information is accessible to individuals with visual impairments and can be processed automatically by machines.

The LaTeX team has designed and implemented a solution that automatically converts standard structural semantics into tagged PDF data. This breakthrough removes the burden of manually preparing specific accessible versions of technical documents, benefiting all workflows—from simple “copy-and-paste” actions to complex format conversions.

Conclusion

This laudatio has highlighted only three areas where Frank Mittelbach has contributed profound research and solutions that 100 million scholars worldwide use daily and often take for granted. It is therefore a great honour that Masaryk University today recognizes this forty-year journey by Frank Mittelbach and his team. By conferring this Honorary Doctorate, the University celebrates their tireless pursuit of quality in the field of document engineering—a legacy from which the entire global scientific community continues to benefit.

S P E E C H

Frank Mittelbach

Your Magnificence, Rector Bareš, Spectabiles, Honorabiles, distinguished colleagues, esteemed guests, ladies, and gentlemen.

It is with deep emotion and gratitude that I stand before you today. To receive the Doctor Honoris Causa from Masaryk University is not just a personal honour. It is also a recognition of the collective efforts of an entire community — the LaTeX Project Team and the many contributors worldwide who have dedicated themselves to advancing open-source scientific publishing and making knowledge available to everybody, in the best manner possible.

I am particularly moved to receive this distinction from an institution that has been a true home for digital typography and the TeX community. Through the Faculty of Informatics, Masaryk University has shown the world that how we communicate science is just as vital as the science itself.

A Journey of Four Decades

TeX is the fruit of Prof. Donald Knuth's vision that it should be possible to transfer beautiful craft typography to the digital age without loss of quality and in this way make it accessible to everyone through (at least partial) automation. Incidentally, he thought of this as a sabbatical project — sketching out the necessary algorithms and then having some of his students do the rest. In the end it took him more than ten years to arrive at a product he felt truly comfortable with. To this Dr. Leslie Lamport added his insight that complex document preparation could be made systematic and reproducible: and that was the birth of LaTeX.

It was in this environment, roughly forty years ago, that I first became involved with the TeX and LaTeX ecosystem. A few years later, in 1989, I was invited to Stanford as part of a Knuth scholarship award and — youthfully naive — lectured boldly on the errors of TeX and LaTeX and what should be improved, with both Don and Leslie in the audi-

ence. In retrospect I pinpointed most pain points correctly, but I woefully misunderstood the underlying complexity of the problems and restrictions under which real systems are operating. Eventually, I learned that lesson.

But the conference in Stanford was fruitful: Don agreed to moving TeX to the next level and extended it to support multiple languages, and Leslie passed on further development and maintenance of LaTeX to me and some fellow collaborators who had pestered him with issues in the past. That moment in Stanford, as I now realize, quietly set the course for the next decades of my professional life. So, what began as a fascination with typography on the one hand and the automation of document creation using computers on the other, developed into a lifelong commitment to researching and developing algorithms and tools that serve science in all disciplines.

Let me insert a declaration of love at this point: there is a wealth of fascinating research questions in the field of document engineering and in automated typesetting. Similar to additive number theory, the area I graduated in, they are typically easy to describe but often hard to solve, with many still awaiting a solution. Over the years I tried my hand at a number of them.

Throughout the decades that followed, I have witnessed and helped LaTeX grow: from a specialized tool used only by mathematicians and computer scientists in the English-speaking world; into the backbone of scientific communication worldwide, across physics, engineering, linguistics, and countless other fields. This growth reflects not technological superiority alone, but a community's commitment to open standards, to reproducibility, backward compatibility, and to the principle that knowledge infrastructure should belong to everyone. To achieve this, LaTeX had to reinvent itself several times without losing sight of its cornerstone qualities.

Behind that evolution there was always a very practical reality: we had to fight with the various limitations and restrictions of the hardware available at the time, and often our ideas were years too early. For example, already in 1991, we designed and implemented a new, and better, internal programming language for LaTeX; but then we had to wait more than a decade for it to be gradually introduced: only in 2020 did it finally become part of LaTeX's core. And already at the turn of the century we experimented with template-based designs but then decided to keep these dormant until now, when computers are powerful enough to make effective use of such concepts.

The Accessibility Imperative

Today, we stand again at a crucial juncture. As we develop the next generation of LaTeX, we face an imperative that is both technical and moral: ensuring that scientific documents are accessible to everyone, including researchers and students with disabilities. The work that Masaryk University recognizes today — our ongoing efforts to integrate accessibility features into LaTeX's core architecture — represents our most important challenge yet.

Creating truly accessible scientific content requires us to rethink fundamental assumptions about how documents are structured and processed. We must ensure that tools such as screen readers can navigate complex equations, that alternative text descriptions preserve mathematical meaning, and that PDF outputs meet international accessibility standards. This work involves collaboration across Europe and beyond — bringing together expertise in semantic markup, assistive technologies, typography, and design.

But accessibility is much more than compliance with standards. It is about recognizing that when we make documents more accessible to people with disabilities, we make them better for everyone. Tagged PDFs enable better text extraction. Semantic markup improves searchability. Alternative descriptions force us to articulate

meaning more clearly. In short, accessible design elevates us all.

Looking Forward

Standing here today, I am thinking about the next generation — the students and researchers who will inherit the tools we build today. What responsibility do we owe them? We must ensure that our document preparation systems can manage the increasingly interdisciplinary nature of modern research, seamlessly integrating mathematics, data visualization, code, and other knowledge content. We must make these tools more approachable without sacrificing their power. And we must continue the work on accessibility, ensuring that disability is never a barrier to participating in scientific discourse.

The challenges ahead are significant. All the issues I have just mentioned — making the centuries-old mathematical notations accessible, bringing millions of existing documents towards compliance, and meeting new European regulations on digital accessibility — are not problems we can solve alone. They require collaboration among software developers, accessibility experts, academic institutions such as Masaryk University, and policymakers.

Closing Thoughts

I accept this honour not for myself alone, but also on behalf of my collaborators in the LaTeX Project Team and the wider open-source community whose collective work has brought us to where we are now.

Moments ago, I pledged my “Spondeo ac polliceor.” I wish to reaffirm that promise now. I pledge to continue cultivating this field, to support this university, and to ensure that the tools we build help to improve the transfer of human knowledge — here in Brno and far beyond.
Thank you. Děkuji vám.

A FEW WORDS ABOUT THE AUDITORIUM MAXIMUM

KAREL ENGLIŠ GREAT HALL

The ceremonies of Masaryk University are nowadays inseparably linked with the auditorium of the Faculty of Law, which serves as a university-wide auditorium.

In its early days, in the 1930s, it was the venue for most of the university's ceremonial moments, which included the inauguration of lecturers and the lavish graduations of honorary doctors. However, the space was considered a temporary makeshift for such ceremonies and was to serve as such only until the construction of the extensive university campus. For this reason, the auditorium was originally austere in character, almost devoid of artistic decoration. The only exception was the ceiling with stained glass windows by František Kysela.

The idea of building a large Academic Quarter with a monumental new hall was gradually abandoned and only the building of the Faculty of Law was realized from the original plan. It was therefore decided to create a more dignified framework for the festivities by decorating the original large blank wall in the front of the auditorium maxima.

The large-scale composition of Prometheus bringing fire to humankind, measuring 7.5×13 metres, is divided into three horizontal strips by Antonín Procházka. In the upper one is the god Helios announcing a new day to humankind, accompanied by the goddess of time Hora. In the middle strip are allegorical figures of all the sciences that were represented at the university - from left to right they are law, medicine, philosophy, art, pedagogy, and natural

sciences. The centre of the painting is dominated by the figure of Prometheus with a burning torch. In the lower band, the work depicts humankind in its daily activities - building, seafaring, and agriculture. The figure of Prometheus is linked in meaning to a group of figures craving the fire of knowledge. The grand opening of Procházka's monumental work took place in the atmosphere of post-Monarchist Czechoslovakia on 16 December 1938. The composition had a turbulent fate during the war period. It was insensitively cut out of the frame by order of the Brno Gestapo, but thanks to the courage of Czech workers it was hidden in the cellar of the building. Three years after the war, the painter's companion completed the restoration of the work, Linka Procházková.

As part of the celebration of the 104th anniversary of the founding of the university in January 2023, the auditorium was named after the first rector of the university and one of the greatest personalities of his time, Karel Engliš.

Karel Engliš was not only the co-author and co-sponsor of the bill on the establishment of the "second Czech university", but later also its first rector, who in cooperation with the then president T. G. Masaryk managed to procure the basis of the university insignia - the rector's chain.

"It is important to remember the past because without it there would be no present. We can be rightly proud of our past because it was shaped by extraordinary personalities whose legacy should be regularly recalled so that it never disappears from our memory," said Martin Bareš, Rector of Masaryk University, during the unveiling of the name of the Karel Engliš Great Hall.

Masaryk University
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