2024 CIRP Annals' Keynote papers

STC A
Implementing circular economy activities in manufacturing for environmental sustainability - Tomohiko Sakao (2), Nancy Bocken, Nabil Nasr, Yasushi Umeda (1)

STC C
Sustainable machining: Recent Technological advances - A. Shokrani (2), P.J. Arrazola (1), D. Biermann (1), P. Mativenga (2), I.S. Jawahir (1)

STC Dn
Advancing product design through data science methods: pathways toward datadriven design (D3) - Ang Liu (2), Stephen Lu (1), Fei Tao (2), Nabil Anwer (1)

STC E
Dynamic Beam Shaping - Improving Laser Materials Processing via Feature Synchronous Energy Coupling - M. Schmidt (1), K. Cvecek, J. Duflou (1), F. Vollertsen (1), C.B. Arnold, M.J. Matthews

STC F
Artificial intelligence in metal forming - Jian Cao (1), Markus Bambach (2), Marion Merklein (1), Mojtaba Mozaffar, Tianju Xue

STC G
Advances in modelling of fixed abrasive processes - Peter Krajnik (2), Konrad Wegener (1), Thomas Bergs (2), Albert J. Shih (1)

STC M
Hybrid metal additive / subtractive machine tools and applications - Scott Smith (1), Tony Schmitz (2), Thomas Feldhausen, Michael Sealy (2)

STC P
Integrated metrology for advanced manufacturing - Andreas Archenti (2), Wei Gao (1), Alkan Donmez (1), Enrico Savio (1), Naruhiro Irino (2)

STC S
Surface conditioning in cutting and abrasive processes - Volker Schulze (2), Jan Aurich (1), I.S. Jawahir (1), Bernhard Karpuschewski (1), Jiwang Yan (2)

Cross-STC
Efficiently preserving material resources in manufacturing: Industrial symbiosis revisited J.R. Duflou (1) , K. Wegener (1), A.E. Tekkaya (1), M. Hauschild (1), F. Bleicher (1), J. Yan (2), B. Hendrickx

Cross-STC
Artificial Intelligence in manufacturing: state of the art, perspectives, and future directions - Robert X. Gao (1), Jörg Krüger (1), Marion Merklein (1), Hans-Christian Möhring (2), Jozsef Vancza (1)