Time	Duration		Title	Speaker/Organizer	Organization
-		ember 2024)			
3:15-9:00	45'	Registration		Fradarik Zahla	
):00-9:20	15'		and conference overview	Frederik Zahle	A to to state -
	45'	Keynote 1	Grand challenges and opportunities for systems engineering	Katherine Dykes Chair: Thanasis Barlas	Aegir Insights
10:05-10:45	40'	1 - Political, e	conomical, social and environmental considerations	Chair: Thanasis Barlas	
	20'	Talk 1	Combined economic-environmental design of offshore wind farms	Samuel Kainz	TUM
	20'	Talk 2	The implications of non-price criteria in offshore wind:	Aje Rihel	Esgian
0.45 11.05	201	Coffee breek	carbon footprint and circularity	•	
0:45-11:05		Coffee break	n and a string a super the full surtain and supply their	Chair: Garrett Barter	
11:05-12:25	90	2 - Opscaling	perspectives across the full system and supply chain Trade-offs in turbine upsizing and their impact on wind	Chair. Garrett Barter	
	20'	Talk 1	energy's commercial future	Philipp Beiter	NREL
			Wind turbine growth: perspectives and de-risk strategies for		
	20'	Talk 2	developers	Matteo Capaldo	Total Energies
	20'	Talk 3	Scaling new heights: the certification perspective on wind turbine growth	Johan Olaison	DNV
	201		Wind Turbine Upscaling Perspectives and Floating Wind	Kanalana	Mine Vene
	20'	Talk 4	Innovations	Kong Long	Ming Yang
2:25-13:25	1h	Lunch			
13:25-14:45	90'	3 - Innovation	n in turbine design, new concepts	Chair: Kenneth Lønbæk	
	20'	Talk 1	Beyond power and loads: modeling the impacts of active	Todd Griffith	UT Dallas
			load control and wake steering on CAPEX, OPEX, and LCOE Wind turbine flap technology development – From		
	20'	Talk 2	laboratory to full scale testing	Helge Aagaard Madsen	DTU
	20'	Talk 3	Beyond 15-MW for generator technology	Garrett Barter	NREL
	20'	Talk 4	The Hybrid-Lambda rotor design and control methodology -	Daniel Ribnitzky	U Oldenburg
1.1E 1E.05	20'	Coffee breek	enabling low-specific-rating offshore wind energy	•	-
4:45-15:05		Coffee break 4 - Software t	alks	Chair: Frederik Zahle	
.5.05-15.45	-10	-+ - Jon Ware L	The future of Bladed, an aero-elastic tool designed for		
	20'	Talk 1	automation and use at scale - How to meet the needs of the	Diogo Samora Cerqueira	DNV
			modern digital world simulation Large-scale multidisciplinary design optimization under	-	University of
	20'	Talk 2	uncertainty using graph-based modeling	John Hwang	California San Dieg
15:45-16:55	70'	5 - IEA Wind		Chair: Frederik Zahle	
	20'	Talk 1	Status of new IEA Task 55 Reference Wind Plant made of	Julian Quick, Samuel	DTU, TUM
	20		22MW wind turbines	Kainz	010,101
	30'	Talk 2	WindIO panel discussion	Julian Quick, Kenneth	DTU
				Lønbæk	
			IEA Wind Task 57: Wind Energy Joint Assessment of Models		
	20'	Talk 3	IEA Wind Task 57: Wind Energy Joint Assessment of Models (Wind JAM)	Niels Troldborg	DTU
	nesday 4 I	December 2024	(Wind JAM) 4)	Niels Troldborg	DTU
9:00-9:10	nesday 4 [ 10'	December 2024 0 - Day 2 Wel	(Wind JAM) 4) come and conference overview		
9:00-9:10 9:10-9:55	nesday 4 [ 10' <b>45'</b>	December 2024 0 - Day 2 Wel Keynote 2	(Wind JAM) a) come and conference overview System integration - a solution to renewable energy	José Blasques	DTU Vattenfall
9:00-9:10 9:10-9:55	nesday 4 [ 10' 45' 90'	December 2024 0 - Day 2 Wel Keynote 2 6 - Machine-l	(Wind JAM) 4) come and conference overview System integration - a solution to renewable energy earning and AI, digital twins, digitalization	José Blasques Chair: Julian Quick	Vattenfall
9:00-9:10 9:10-9:55	nesday 4 [ 10' <b>45'</b>	December 2024 0 - Day 2 Wel Keynote 2	(Wind JAM) a) come and conference overview System integration - a solution to renewable energy	José Blasques	
9:00-9:10 9:10-9:55	nesday 4 [ 10' 45' 90'	December 2024 0 - Day 2 Wel Keynote 2 6 - Machine-l	(Wind JAM) (Wind JAM) come and conference overview System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven	José Blasques Chair: Julian Quick	Vattenfall
):00-9:10 ):10-9:55	<b>10'</b> <b>45'</b> <b>90'</b> 20' 20'	December 2024 0 - Day 2 Wel Keynote 2 6 - Machine-Ir Talk 1 Talk 2	(Wind JAM) (Wind JAM) (come and conference overview System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard	Vattenfall DTU SGRE
):00-9:10 ):10-9:55	<b>nesday 4 [</b> 10' <b>45'</b> <b>90'</b> 20' 20' 20'	Occember 2024 0 - Day 2 Well Keynote 2 6 - Machine-le Talk 1 Talk 2 Talk 3	(Wind JAM) (Wind	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani	Vattenfall DTU SGRE TU Delft
:00-9:10 :10-9:55 :55-11:15	nesday 4 [ 10' 45' 90' 20' 20' 20' 20' 20'	December 2024 0 - Day 2 Wel Keynote 2 6 - Machine-la Talk 1 Talk 2 Talk 3 Talk 4	(Wind JAM) (Wind	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard	Vattenfall DTU SGRE
0:00-9:10 0:10-9:55 0:55-11:15 1:15-11:35	<b>10'</b> <b>45'</b> <b>90'</b> 20' 20' 20' 20' 20' 20' 20' 20'	December 2024 0 - Day 2 Wel Keynote 2 6 - Machine-le Talk 1 Talk 2 Talk 3 Talk 4 Coffee break	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and Al, digital twins, digitalization TWAIN: Advancing Wind Farm Control through Al-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in Al & systems engineering	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan	Vattenfall DTU SGRE TU Delft
0:00-9:10 0:10-9:55 0:55-11:15 1:15-11:35	<b>10'</b> <b>45'</b> <b>90'</b> 20' 20' 20' 20' 20' 20' <b>90'</b>	Occember 2024 O - Day 2 Well Keynote 2 G - Machine-le Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w	(Wind JAM) 4) come and conference overview System integration - a solution to renewable energy earning and Al, digital twins, digitalization TWAIN: Advancing Wind Farm Control through Al-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in Al & systems engineering ind	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas	Vattenfall DTU SGRE TU Delft US DOE
0:00-9:10 0:10-9:55 0:55-11:15 1:15-11:35	<b>10'</b> <b>45'</b> <b>90'</b> 20' 20' 20' 20' 20' <b>90'</b> 20' <b>90'</b> 20'	December 2024 0 - Day 2 Well Keynote 2 6 - Machine-la Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1	(Wind JAM) a) come and conference overview System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering ind Holistic design experiences in floating wind turbine	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg	Vattenfall DTU SGRE TU Delft US DOE Stiesdal
9:00-9:10 9:10-9:55	<b>10'</b> <b>45'</b> <b>90'</b> 20' 20' 20' 20' 20' 20' <b>90'</b>	Occember 2024 O - Day 2 Well Keynote 2 G - Machine-le Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w	(Wind JAM) 4) come and conference overview System integration - a solution to renewable energy earning and Al, digital twins, digitalization TWAIN: Advancing Wind Farm Control through Al-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in Al & systems engineering ind	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas	Vattenfall DTU SGRE TU Delft US DOE
0:00-9:10 0:10-9:55 0:55-11:15 1:15-11:35	<b>10'</b> <b>45'</b> <b>90'</b> 20' 20' 20' 20' <u>20'</u> <b>90'</b> 20' <b>90'</b> 20'	December 2024 0 - Day 2 Well Keynote 2 6 - Machine-la Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1	(Wind JAM) (Wind	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg	Vattenfall DTU SGRE TU Delft US DOE Stiesdal Principle Power
:00-9:10 :10-9:55 :55-11:15 1:15-11:35	<b>10'</b> <b>45'</b> <b>90'</b> 20' 20' 20' 20' 20' 20' 20' 20'	December 2024 0 - Day 2 Well Keynote 2 6 - Machine-le Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data:	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira	Vattenfall DTU SGRE TU Delft US DOE Stiesdal Principle Power
:00-9:10 :10-9:55 :55-11:15 1:15-11:35 1:35-12:55	<b>esday 4 I</b> 10' <b>45'</b> <b>90'</b> 20' 20' 20' 20' 20' 20' 20' 20' 20' 20'	Occember 2024 O - Day 2 Well Keynote 2 G - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 3 Talk 4	(Wind JAM) (Wind	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna	Vattenfall DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin
2:55-13:55	<b>esday 4 I</b> 10' <b>45'</b> <b>90'</b> 20' 20' 20' 20' 20' 20' 20' 20' 20' 20'	Oecember 2024 0 - Day 2 Well Keynote 2 6 - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (Mind) Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee	Vattenfall DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin
0:00-9:10 0:10-9:55 0:55-11:15 1:15-11:35	<b>esday 4 I</b> 10' 45' 20' 20' 20' 20' 20' 20' 20' 20	Occember 2024 0 - Day 2 Well Keynote 2 6 - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 8 - Systems en	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (Mind) Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter	Vattenfall DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin PeakWind
2:55-13:55	<b>esday 4 I</b> 10' <b>45'</b> <b>90'</b> 20' 20' 20' 20' 20' 20' 20' 20' 20' 20'	Oecember 2024 0 - Day 2 Well Keynote 2 6 - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (Mind) Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee	Vattenfall DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin
:00-9:10 :10-9:55 :55-11:15 1:15-11:35 1:35-12:55 2:55-13:55	losday 4 I           10'           45'           90'           20'	December 2024 0 - Day 2 Well Keynote 2 6 - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 3 Talk 3 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook Ingineering at the wind farm level Plant Design System Engineering	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux	Vattenfall DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin PeakWind
:00-9:10 :10-9:55 :55-11:15 1:15-11:35 1:35-12:55 1:35-12:55 3:15-14:45	<b>esday 4 I</b> 10' 45' 90' 20' 20' 20' 20' 20' 20' 20' 2	Occember 2024 G - Day 2 Well Keynote 2 G - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 1 Talk 2 Talk 3 Talk 4	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook ngineering at the wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis Pierre Elouan Rethoré	Vattenfall DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin PeakWind
2:00-9:10 2:10-9:55 2:55-11:15 1:15-11:35 1:35-12:55 1:35-12:55 2:55-13:55	<b>esday 4 I</b> 10' 45' 90' 20' 20' 20' 20' 20' 20' 20' 2	Occember 2024 G - Day 2 Well Keynote 2 G - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 1 Talk 2 Talk 3 Talk 4	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (Mind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook mgineering at the wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties et hybrid power plants	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis	Vattenfall DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin PeakWind Vestas Shell NREL
2:55-11:15 1:15-11:35 1:35-12:55 1:35-12:55 1:35-12:55 1:35-12:55 1:35-14:45	<b>esday 4 I</b> 10' 45' 90' 20' 20' 20' 20' 20' 20' 20' 2	Occember 2024 G - Day 2 Well Keynote 2 G - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 1 Talk 2 Talk 3 Talk 4	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (Mind) Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook mgineering at the wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis Pierre Elouan Rethoré	Vattenfall DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin PeakWind Vestas Shell NREL
2:55-11:15 1:15-11:35 1:35-12:55 1:35-12:55 1:35-12:55 1:35-12:55 1:35-14:45	losday 4 I           10'           45'           90'           20'	Occember 2024 0 - Day 2 Well Keynote 2 6 - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook Ingineering at the wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties 26 hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis Pierre Elouan Rethoré Chair: Julian Quick Jenna Iori	Vattenfall DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin PeakWind Vestas Shell NREL DTU TU Delft
2:55-11:15 1:15-11:35 1:35-12:55 1:35-12:55 1:35-12:55 1:35-12:55 1:35-14:45	Instant         Instant <thinstant< th=""> <thinstant< th=""> <thi< td=""><td>December 2024 0 - Day 2 Well Keynote 2 6 - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2</td><td>(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI &amp; systems engineering (ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&amp;M numerical models vs real data: status, approach and outlook (Note that the wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications</td><td>José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis <u>Pierre Elouan Rethoré</u> Chair: Julian Quick Jenna Iori Juan Pablo Murcia</td><td>Vattenfall  DTU SGRE TU Delft US DOE  Stiesdal Principle Power TU-Berlin PeakWind  Vestas Shell NREL DTU TU Delft DTU</td></thi<></thinstant<></thinstant<>	December 2024 0 - Day 2 Well Keynote 2 6 - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook (Note that the wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis <u>Pierre Elouan Rethoré</u> Chair: Julian Quick Jenna Iori Juan Pablo Murcia	Vattenfall  DTU SGRE TU Delft US DOE  Stiesdal Principle Power TU-Berlin PeakWind  Vestas Shell NREL DTU TU Delft DTU
:00-9:10 :10-9:55 :55-11:15 1:15-11:35 1:35-12:55 1:35-12:55 3:15-14:45	Instant         Instant <thinstant< th=""> <thinstant< th=""> <thi< td=""><td>December 2024 0 - Day 2 Weld Keynote 2 6 - Machine-le Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3</td><td>(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI &amp; systems engineering (ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&amp;M numerical models vs real data: status, approach and outlook (Nove engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties (ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications Wind turbine design for hydrogen production</td><td>José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis <u>Pierre Elouan Rethoré</u> Chair: Julian Quick Jenna Iori Juan Pablo Murcia Jared Thomas</td><td>Vattenfall  DTU SGRE TU Delft US DOE  Stiesdal Principle Power TU-Berlin PeakWind  Vestas Shell NREL DTU TU Delft DTU NREL</td></thi<></thinstant<></thinstant<>	December 2024 0 - Day 2 Weld Keynote 2 6 - Machine-le Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook (Nove engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties (ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications Wind turbine design for hydrogen production	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis <u>Pierre Elouan Rethoré</u> Chair: Julian Quick Jenna Iori Juan Pablo Murcia Jared Thomas	Vattenfall  DTU SGRE TU Delft US DOE  Stiesdal Principle Power TU-Berlin PeakWind  Vestas Shell NREL DTU TU Delft DTU NREL
2:00-9:10 2:10-9:55 2:55-11:15 1:15-11:35 1:35-12:55 1:35-12:55 2:55-13:55 3:15-14:45 4:45-16:05	resday 4 I 10' 45' 90' 20' 20' 20' 20' 20' 20' 20' 20' 20' 2	Occember 2024 G - Day 2 Well Keynote 2 G - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3 Talk 4	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook (Note that the wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis Pierre Elouan Rethoré Chair: Julian Quick Jenna Iori Juan Pablo Murcia	Vattenfall  DTU SGRE TU Delft US DOE  Stiesdal Principle Power TU-Berlin PeakWind  Vestas Shell NREL DTU TU Delft DTU
2:00-9:10 2:10-9:55 2:55-11:15 1:15-11:35 1:35-12:55 1:35-12:55 2:55-13:55 3:15-14:45	Instant         Instant <thinstant< th=""> <thinstant< th=""> <thi< td=""><td>December 2024 0 - Day 2 Weld Keynote 2 6 - Machine-le Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3</td><td>(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI &amp; systems engineering (ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&amp;M numerical models vs real data: status, approach and outlook (Note engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications Wind turbine design for hydrogen production Designing hybrid power plants</td><td>José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis <u>Pierre Elouan Rethoré</u> Chair: Julian Quick Jenna Iori Juan Pablo Murcia Jared Thomas</td><td>Vattenfall  DTU SGRE TU Delft US DOE  Stiesdal Principle Power TU-Berlin PeakWind  Vestas Shell NREL DTU TU Delft DTU NREL</td></thi<></thinstant<></thinstant<>	December 2024 0 - Day 2 Weld Keynote 2 6 - Machine-le Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook (Note engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications Wind turbine design for hydrogen production Designing hybrid power plants	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis <u>Pierre Elouan Rethoré</u> Chair: Julian Quick Jenna Iori Juan Pablo Murcia Jared Thomas	Vattenfall  DTU SGRE TU Delft US DOE  Stiesdal Principle Power TU-Berlin PeakWind  Vestas Shell NREL DTU TU Delft DTU NREL
<ul> <li>100-9:10</li> <li>110-9:55</li> <li>1:55-11:15</li> <li>1:15-11:35</li> <li>1:35-12:55</li> <li>1:35-12:55</li> <li>3:15-14:45</li> <li>4:45-16:05</li> <li>6:05-16:25</li> </ul>	resday 4 I 10' 45' 90' 20' 20' 20' 20' 20' 20' 20' 20' 20' 2	Occember 2024 O - Day 2 Well Keynote 2 6 - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3 Talk 4 0 - Software	(Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (Wind JAM) (System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering (ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook (Note engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications Wind turbine design for hydrogen production Designing hybrid power plants	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis Pierre Elouan Rethoré Chair: Julian Quick Jenna Iori Juan Pablo Murcia Jared Thomas Michiel Goderie	Vattenfall  DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin PeakWind Vestas Shell NREL DTU TU Delft DTU NREL Vattenfall
:00-9:10 :10-9:55 :55-11:15 :55-11:15 1:15-11:35 1:35-12:55 3:15-14:45 4:45-16:05 6:05-16:25	Instant         Instant <thinstant< th=""> <thinstant< th=""> <thi< td=""><td>Occember 2024 O - Day 2 Well Keynote 2 G - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3 Talk 4 O - Software Talk 1</td><td>(Wind JAM) t) come and conference overview System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI &amp; systems engineering ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&amp;M numerical models vs real data: status, approach and outlook Ind How we engineer the system at Shell Floating wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications Wind turbine design for hydrogen production Designing hybrid power plants WEIS and FAST.Farm: Advancements Beyond Wind Turbine Aero-Elasticity</td><td>José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis Pierre Elouan Rethoré Chair: Julian Quick Jenna Iori Juan Pablo Murcia Jared Thomas Michiel Goderie Chair: Frederik Zahle Jason Jonkman</td><td>Vattenfall  UTU SGRE TU Delft US DOE  Stiesdal Principle Power TU-Berlin PeakWind  Vestas Shell NREL DTU TU Delft DTU NREL Vattenfall  NREL</td></thi<></thinstant<></thinstant<>	Occember 2024 O - Day 2 Well Keynote 2 G - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3 Talk 4 O - Software Talk 1	(Wind JAM) t) come and conference overview System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook Ind How we engineer the system at Shell Floating wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications Wind turbine design for hydrogen production Designing hybrid power plants WEIS and FAST.Farm: Advancements Beyond Wind Turbine Aero-Elasticity	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis Pierre Elouan Rethoré Chair: Julian Quick Jenna Iori Juan Pablo Murcia Jared Thomas Michiel Goderie Chair: Frederik Zahle Jason Jonkman	Vattenfall  UTU SGRE TU Delft US DOE  Stiesdal Principle Power TU-Berlin PeakWind  Vestas Shell NREL DTU TU Delft DTU NREL Vattenfall  NREL
:00-9:10           :10-9:55           :55-11:15           1:15-11:35           1:35-12:55           2:55-13:55           3:15-14:45           4:45-16:05           6:05-16:25           6:25-16:55	resday 4 I 10' 45' 90' 20' 20' 20' 20' 20' 20' 20' 2	December 2024           0 - Day 2 Well           Keynote 2           6 - Machine-li           Talk 1           Talk 2           Talk 3           Talk 4           Coffee break           7 - Floating w           Talk 1           Talk 2           Talk 3           Talk 4           Lunch           8 - Systems en           Talk 1           Talk 2           Talk 3           Talk 4           9 - Wind-base           Talk 3           Talk 1           Talk 2           Talk 3           Talk 4           0 - Wind-base           Talk 1           Talk 2           Talk 3           Talk 4           Oralk 4           Coffee break           10 - Software           Talk 1           Talk 2	(Wind JAM) t) come and conference overview System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook mgineering at the wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications Wind turbine design for hydrogen production Designing hybrid power plants WEIS and FAST.Farm: Advancements Beyond Wind Turbine Aero-Elasticity From PyWake to Dynamiks	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis Pierre Elouan Rethoré Chair: Julian Quick Jenna Iori Juan Pablo Murcia Jared Thomas Michiel Goderie Chair: Frederik Zahle Jason Jonkman	Vattenfall  DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin PeakWind Vestas Shell NREL DTU TU Delft DTU NREL Vattenfall
:00-9:10 :10-9:55 :55-11:15 1:15-11:35 1:35-12:55 2:55-13:55 3:15-14:45 4:45-16:05 6:05-16:25 6:25-16:55 6:55-17:10	Instant         Instant <thinstant< th=""> <thinstant< th=""> <thi< td=""><td>Occember 2024 O - Day 2 Well Keynote 2 G - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3 Talk 4 O - Software Talk 1</td><td>(Wind JAM) t) come and conference overview System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI &amp; systems engineering ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&amp;M numerical models vs real data: status, approach and outlook mgineering at the wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications Wind turbine design for hydrogen production Designing hybrid power plants WEIS and FAST.Farm: Advancements Beyond Wind Turbine Aero-Elasticity From PyWake to Dynamiks</td><td>José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis Pierre Elouan Rethoré Chair: Julian Quick Jenna Iori Juan Pablo Murcia Jared Thomas Michiel Goderie Chair: Frederik Zahle Jason Jonkman</td><td>Vattenfall  DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin PeakWind Vestas Shell NREL DTU TU Delft DTU NREL Vattenfall NREL</td></thi<></thinstant<></thinstant<>	Occember 2024 O - Day 2 Well Keynote 2 G - Machine-li Talk 1 Talk 2 Talk 3 Talk 4 Coffee break 7 - Floating w Talk 1 Talk 2 Talk 3 Talk 4 Lunch 8 - Systems en Talk 1 Talk 2 Talk 3 Talk 4 9 - Wind-base Talk 1 Talk 2 Talk 3 Talk 4 O - Software Talk 1	(Wind JAM) t) come and conference overview System integration - a solution to renewable energy earning and AI, digital twins, digitalization TWAIN: Advancing Wind Farm Control through AI-Driven Multidisciplinary Process Modelling and Data Integration Innovative winds: digital twins and ML at Siemens Energy Generation of synthetic SCADA signals using cGANs for enhanced wind turbine fault detection and prognosis US DOE priorities for investment in AI & systems engineering ind Holistic design experiences in floating wind turbine Optimizing floating wind turbine design: the role of tower eigenfrequency in dynamic loads Optimization of FOWT Designs: QBlade in the WEIS Validating floating wind O&M numerical models vs real data: status, approach and outlook mgineering at the wind farm level Plant Design System Engineering How we engineer the system at Shell Floating wind array ontology and modeling framework Towards wind farm design accounting for uncertainties ed hybrid power plants Dispatchable power from wind: the case of baseload hybrid power plants HyDesign and applications Wind turbine design for hydrogen production Designing hybrid power plants WEIS and FAST.Farm: Advancements Beyond Wind Turbine Aero-Elasticity From PyWake to Dynamiks	José Blasques Chair: Julian Quick Tuhfe Göçmen Jeppe Funk Kirkegaard Ali Eftekhani Milani Shreyas Ananthan Chair: Thanasis Barlas Michael Borg Rafael Madureira Robert Behrens de Luna Paul Watissee Chair: Garrett Barter Ewan Machefaux Sebastian Sanchez Leah Sirkis Pierre Elouan Rethoré Chair: Julian Quick Jenna Iori Juan Pablo Murcia Jared Thomas Michiel Goderie Chair: Frederik Zahle Jason Jonkman	Vattenfall  DTU SGRE TU Delft US DOE Stiesdal Principle Power TU-Berlin PeakWind Vestas Shell NREL DTU TU Delft DTU NREL Vattenfall NREL