| 9-Sep-20  | 0                       |                      |   |                  |                |                                    |
|---|-------------------------|----------------------|---|------------------|----------------|------------------------------------|
| Please find the papers to be presented at IPC 2020.           |                         |                      |   |                  |                |                                    |
| The listing notates which papers will be presented in the vir | rtual conference and wh | nich will be availat | ble to attendees in paper only format.                                    |                  |                |                                    |
| During the virtual conference, approximately 60 of these pa   |                         |                      |   |                  |                |                                    |
| These papers will be announced in the coming days.            | pers will be presented  |                      |   |                  |                |                                    |
|   | ,                       |                      |   |                  |                |                                    |
| Note that all virtual papers will have Q&A process attached   |                         |                      |   |                  |                |                                    |
| Papers are subject to change.                                 |                         |                      |   |                  |                |                                    |
| Track   | Presentation Type       | ASME Paper Nu        | Paper Title   | Author First Nam | Author Last Na | Company                            |
|   |                         |                      | Api Rp 1173 Third Party Assessments: A Key Industry Tool for Evaluating   |                  |                |                                    |
| Track 1: Pipeline Safety Management Systems                   | Virtual Presentation    | IPC2020-9370         | and Supporting Implementation of Pipeline Safety Management Systems       | Whitney          | Medina         | American Petroleum Institute       |
| Track 1: Pipeline Safety Management Systems                   | Virtual Presentation    | IPC2020-9374         | How Do I Ensure "Staff Competency" in My Pipeline Safety Management       | Karen            | Collins        | ROSEN USA                          |
|   |                         |                      | Comparison of Buried Pipeline Crossing Assessments Using Api Rp 1102,     |                  |                |                                    |
| Track 1: Pipeline Safety Management Systems                   | Virtual Presentation    | IPC2020-9519         | Analytical Methods, and Finite Element Approach                           | Nikhil           | Joshi          | Stress Engineering Services        |
|   |                         |                      | Investigation and Adoption of Apga's Pipeline Engineer Competency         |                  |                |                                    |
| Track 1: Pipeline Safety Management Systems                   | Virtual Presentation    | IPC2020-9561         | System - the Canadian Experience  | Reena            | Sahney         | PBOK Consulting                    |
| Track 1: Pipeline Safety Management Systems                   | Virtual Presentation    | IPC2020-9639         | Pipeline Class Reclassification - Standards Criteria & Best Practices     | Barbara          | Matos          | DNV GL                             |
| Track 1: Pipeline Safety Management Systems                   | Paper Only              | IPC2020-9764         | Corrective Action Plans Oversight and Management : Regulatory             | Bushra           | Waheed         | BC Oil and Gas Commission          |
| Track 2: Project Management, Design, Construction and         |                         |                      | g   | Buomu            |                |                                    |
| Environmental Issues  | Virtual Presentation    | IPC2020-9204         | Pump Station Design 2, a Tale of Two Pump Stations                        | Jim              | Horner         | AscenTech Engineering              |
| Track 2: Project Management, Design, Construction and         | Virtual i reseritation  | 11 02020-3204        | Relief Tanks: Parameters to Consider When Designing Relief Systems and    | 5111             | Tiomer         | Ascenteon Engineering              |
| Environmental Issues  | Virtual Dresentation    | IPC2020-9309         | Connections to Tanks  | Emmo             | Derez          | Enbridge Dinelines                 |
| Track 2: Project Management, Design, Construction and         | Virtual Presentation    | IPC2020-9309         | Connections to Tanks  | Emma             | Perez          | Enbridge Pipelines                 |
|   |                         |                      |   | o                | 0.111          |                                    |
| Environmental Issues  | Virtual Presentation    | IPC2020-9334         |   | Sheldon          | Smith          | Stantec Consulting Ltd             |
| Track 2: Project Management, Design, Construction and         |                         |                      | Assessing Potential Impacts to Waterways From Small Volume Releases       |                  |                |                                    |
| Environmental Issues  | Virtual Presentation    | IPC2020-9377         | Originating From Facilities or Equipment                                  | Jeremy           | Fontenault     | RPS ASA                            |
| Track 2: Project Management, Design, Construction and         |                         |                      | Hot Bitumen Pipeline Valve Replacement: Pipe Prop Anchoring Design        |                  |                |                                    |
| Environmental Issues  | Virtual Presentation    | IPC2020-9391         | With Mechanical Tensioning  | Victoria         | Stranzinger    | Worley                             |
| Track 2: Project Management, Design, Construction and         |                         |                      |   |                  |                |                                    |
| Environmental Issues  | Virtual Presentation    | IPC2020-9402         | Design and Construction Challenges of a Roped Insulated Pipeline          | Neetu            | Prasad         | Worley                             |
| Track 2: Project Management, Design, Construction and         |                         |                      |   |                  |                |                                    |
| Environmental Issues  | Virtual Presentation    | IPC2020-9661         | Effects of Slope Grade on Soil-Pipe Interaction—full-Scale Experiments    | Mohammad         | Katebi         | University of Manitoba             |
| Track 2: Project Management, Design, Construction and         | Virtual 1 100011tdtion  | 11 02020 0001        | Streamlining the Gis to Cad Workflow for Automated Pipeline Alignment     | Monaninad        | T GLODI        |                                    |
| Environmental Issues  | Virtual Presentation    | IPC2020-9673         | Sheet Generation  | Kshama           | Roy            | Northern Crescent Inc.             |
| Track 2: Project Management, Design, Construction and         | VITUAL FIESEIIIalion    | IF 62020-9073        | Comparison of Remote Sensing Techniques for Centreline and Weld           | Nonania          | КОУ            | Northern Crescent Inc.             |
| Environmental Issues  | Vintual Dura antation   |                      | Mapping in Place of Manual Survey in Hazardous Environments               | Lessah           | 1.11           | Lux Modus Ltd.                     |
|   | Virtual Presentation    | IPC2020-9730         | 4d Inspection: A Comprehensive Platform to Digitize Pipeline Construction | Joseph           | Hlady          | Lux Modus Liu.                     |
| Track 2: Project Management, Design, Construction and         |                         |                      | · · · · · · · · · · · · · · · · · · ·                                     | a                |                | TO F                               |
| Environmental Issues  | Virtual Presentation    | IPC2020-9735         | Inspection and Generate Data Driven Continuous Improvement                | Sukhi            | Gill           | TC Energy                          |
| Track 2: Project Management, Design, Construction and         |                         |                      | Development of Lifting and Lowering-in Plan for the Control of            |                  |                | Center for Reliable Energy Systems |
| Environmental Issues  | Virtual Presentation    | IPC2020-9753         | Construction Stresses   | Yong-Yi          | Wang           | (Track Chair)                      |
| Track 2: Project Management, Design, Construction and         |                         |                      |   |                  |                |                                    |
| Environmental Issues  | Virtual Presentation    | IPC2020-9769         | Formulation of 3d Soil Springs for Pipe Stress Analyses                   | Ryan             | Phillips       | Memorial University                |
| Track 2: Project Management, Design, Construction and         |                         |                      |   |                  |                |                                    |
| Environmental Issues  | Virtual Presentation    | IPC2020-9770         | Developing a Representative Soil Response Model                           | Ryan             | Phillips       | Memorial University                |
| Track 2: Project Management, Design, Construction and         |                         |                      | Dynamic Thrust Loads on Piping From a Blowdown Stack to a Silencer at     |                  |                |                                    |
| Environmental Issues  | Paper Only              | IPC2020-9244         | a Separation Distance Away  | Kamal            | Botros         | Nova Husky Res Corp                |
| Track 2: Project Management, Design, Construction and         |                         | l l                  | Installation Errors in Polyethylene Pipe for Natural Gas Service – Recent |                  |                | National Transportation Safety     |
| Environmental Issues  | Paper Only              | IPC2020-9653         | Case Histories by the National Transportation Safety Board (Ntsb)         | Frank            | Zakar          | Board                              |
| Track 2: Project Management, Design, Construction and         |                         |                      | Geotechnical Lessons Learned From Nineteen Railway Trenchless             |                  |                |                                    |
| Environmental Issues  | Paper Only              | IPC2020-9702         | Crossings During Construction of a Transmission Pipeline                  | Jack             | Park           | BGC Engineering Inc.               |
| Track 3: Pipeline and Facilities Integrity                    | Virtual Presentation    | IPC2020-9702         | H2 in an Exisiting Natural Gas Pipeline                                   | Otto Jan         | Huising        | N.V. Nederlandse Gasunie           |
| Track 3: Pipeline and Facilities Integrity                    |                         | IPC2020-9203         |   | HAMID            | MOSTAGHIMI     | Home                               |
| Track 5. Fipeline and Facilities integrity                    | Virtual Presentation    | 1502020-9231         | Applying Advanced Ultrasonic In-Line Inspections Technologies to          |                  |                |                                    |
| Treak 2. Dinalina and Capilitian Intervity                    | Vistoral December'      |                      |   | 0                | 14/            | NDT Clabel Inc                     |
| Track 3: Pipeline and Facilities Integrity                    | Virtual Presentation    | IPC2020-9251         | Effectively Manage Hook Cracks  | Cory             | Wargacki       | NDT Global Inc.                    |
| Track 3: Pipeline and Facilities Integrity                    | Virtual Presentation    | IPC2020-9254         | Peer Review of the Plausible Profiles Corrosion Assessment Model          | John             | Kiefner        | Retired                            |
| Track 3: Pipeline and Facilities Integrity                    | Virtual Presentation    | IPC2020-9268         | Near-Neutral Ph Stress Corrosion Cracking Growth Model Trials:            | Lyndon           | Lamborn        | Enbridge Liquids Pipelines         |

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| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9269  | Pipe Stress and Deflection During an Integrity Dig   | Leping         | Li           | University of Calgary             |
|--|----------------------|---------------|--|----------------|--------------|-----------------------------------|
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9285  | Assessing Soil Corrosivity for Buried Structural Steel   | Yannick        | Beauregard   | NOVA Chemicals                    |
|  |                      |               | Slope Movement Inspection Using Axial Strain Data Across Multiple Lines  |                | Ŭ            |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9288  | and Repeat Inspections   | Mohamed        | Elseify      | Baker Hughes Canada               |
|  |                      |               | Full Encirclement Engineered Laminated Steel Sleeve System for Repairs   |                | , í          |                                   |
|  |                      |               | and Augmentation of Pipelines: The Engineering Development, Validation   |                |              |                                   |
|  |                      |               | Test Results, and Implications for Mitigation of Both Stress and Strain  |                |              |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9303  | Dependent Integrity Threats  | Shawn          | Laughlin     | Pipe Spring LLC                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9307  | A Bayesian Approach for Effective Use of Multiple Measurements of Crack  | Smitha         | Koduru       | C-FER Technologies                |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9312  | Failure Pressure Prediction of Cracks in Corrosion Defects Using Xfem  | Xinfang        | Zhang        | University of Alberta             |
|  |                      |               | An Improved Methodology for Prioritizing Pipelines With Respect to   | -              | -            | -                                 |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9328  | Fatigue Seam Weld Cracking   | Michael        | Turnquist    | Quest Integrity Group             |
|  |                      |               | Life Expectancy of Decommissioned Pipelines Under External Corrosion -   |                |              |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9329  | Probabilistic Modeling   | Ron Chik-Kwong | Wong         | University of Calgary             |
|  |                      |               | A Feature-Specific Probabilistic Assessment of Pipeline Defect Size From   |                |              |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9331  | Ili Mfl Signal Using Convolutional Neural Network  | stephen        | westwood     | Onstream Pipeline                 |
|  |                      |               | Advanced Eddy Current Array Tools for Stress Corrosion Cracking Direct   |                |              |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9335  | Assessment on Pipelines  | michael        | sirois       | Eddyfi Technologies               |
|  |                      |               | Crack Driving Force Calculation in Arbitrarily Shaped Defects Based on 3d  |                |              |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9357  | Non-Destructive Evaluation and Finite Element Analysis   | Stijn          | Hertelé      | Universiteit Gent                 |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9373  | Distribution Reliability Assessment Using Machine Learning   | Jason          | Skow         | C-FER Technologies                |
|  |                      |               | At the Forefront of In-Line Crack Inspection Services – a Highly Versatile   |                |              |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9386  | Crack Inspection Platform for Complex Flaw Morphologies and Absolute   | Dr. Thomas     | Hennig       | NDT Global                        |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9389  | Vintage Pipeline Steel Fracture Toughness Measurements   | Sergio         | Limon        | ELEVARA Partners                  |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9392  | Modelling Stress-Activated Creep at Axial Cracks in Pipelines  | Brian          | Leis         | B N Leis, Consultant Inc.         |
|  |                      |               | An Onshore Pipeline Failure Produced by Cathodic-Protection-Induced  |                |              |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9396  | Hydrogen Cracking – Case Study   | Pablo          | Cazenave     | Blade Energy Partners             |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9399  | Reliability-Based Assessment of Safe Excavation Pressure for Dented  | Chike          | Okoloekwe    | Enbridge LP                       |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9400  | Manufactured Cracks in Pipe Used to Evaluate ILI Measurement   | Jason          | Skow         | C-FER Technologies                |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9464  | Pipe Knocked From Supports by Hydraulic Transient Event  | Lawrence       | Matta        | Stress Engineering Services       |
|  |                      |               | Managing the Threat of Selective Seam Weld Corrosion Using a State of  |                |              |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9465  | the Art IIi System   | Simon          | Slater       | ROSEN                             |
|  |                      |               | Achieving Consistent Safety by Using Appropriate Safety Factors in   |                |              |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9470  | Corrosion Management Program   | Mohammad       | Al-Amin      | Transcanada Corporation           |
|  |                      |               | Improved Semi-Quantitative Reliability-Based Method for Assessment of  |                |              | · · ·                             |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9472  | Pipeline Dents With Stress Risers  | Muntaseer      | Kainat       | University of Alberta             |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9476  | Puddling Puddle Welds  | Dane           | Burden       | TDW                               |
|  |                      |               | Improved Surface Loading Stress Analysis Method Considering Protection   |                |              |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9478  | Measures   | Shenwei        | Zhang        | Transcanada Pipeline Ltd          |
|  |                      |               | Improving Data Collection With In-Line Inspection in Low-Pressure Gas  |                |              | '                                 |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9481  | Distribution Networks  | Johannes       | Becker       | ROSEN Group                       |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9486  | A Midstream Pipeline Operator's Perspective on the Implementation of Api   | Joseph         | Bratton      | DNV GL                            |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9493  | Statistical Analysis of Dig Operations Leading to Productive Repairs   | Sheena         | Sandhu       | OneBridge Solutions, Inc.         |
|  |                      |               | Overcoming Challenges of Emat In-Line Inspection Validation for Scc  |                |              |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9494  | Management in Natural Gas Pipelines - a Practical Approach   | Dan            | Williams     | Dynamic Risk                      |
|  |                      |               |  |                |              | Det Norske Veritas (U.S.A.), Inc. |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9499  | In-Service Cracking/leak at Bottom Side Repaired Dent  | Gregory        | Quickel      | (DNV GL)                          |
|  |                      | 02020-0400    | Judge Me by My Size, Do You? Or: How Reliable Are Dent Assessments   | 5.090ij        |              | (= <b></b> )                      |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9501  | Based on Ili Data?   | Rhett          | Dotson       | ROSEN USA, Inc.                   |
|  |                      | 02020-0001    | Integrity Validation of Small Diameter-Thin Wall Pipeline Susceptible to   |                | 2 3 10011    |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9503  | Cracking or Crack-Like Indications-a Case Study  | Nima           | Parsi        | Skystone International            |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9505  | An Engineering Assessment Methodology to Evaluate Arc Burns  | Alireza        | Kohandehghan | Stantec Consulting Ltd.           |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9508  | Comparison of Non-Destructive Examination Techniques for Crack   | Khurram        | Shahzad      | Enbridge Pipelines Inc.           |
|  |                      | 11 02020-9008 | The Impact of Pressure Fluctuations on the Early Onset of Stage Ii Growth  | munani         | Griarizaŭ    |                                   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9511  | of High Ph Stress Corrosion Crack  | Hamid          | Niazi        | Liniversity of Alberta            |
| Track 3: Pipeline and Facilities Integrity<br>Track 3: Pipeline and Facilities Integrity | Virtual Presentation |               |  | Hamid          |              | University of Alberta             |
|  | Virtual Presentation | IPC2020-9512  | Integrity Management of Flange Connections Using Reliability Model   | Syed           | Haider       | Enbridge Pipelines Inc.           |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9520  | A Prudent Approach to Evaluate Dig Effectiveness   | Aaron          | Woo          | TC Energy                         |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation | IPC2020-9523  | Third Party Damage Monitoring: Internal Fiber Optic Installation on a<br>Transmission Pipeline Using a Pig, a Disengagement System and a Pack- | Carly          | Meena        | TransGas Limited                  |
|  |                      |               |  |                |              |                                   |

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| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9544   | Cracks in Dents: How Can I Use an Ultrasonic Crack Ili Robot to Detect   | Dogolio  | Cupierde Bedrie  | NDT Global GmbH & Co. KG  |
|--|---|--|--|--|--|---|
|  | Virtual Presentation  | IPC2020-9544   | Integration of Multiple III Technologies for Robust Understanding of Unique  | Rogelio  | Guajardo Rodrig  | IND I Giobai Gilibh & Co. KG  |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9548   | Anomalies on a Pipeline  | Taylor   | Shie   | Shell Pipeline Company, LP  |
|  | Virtuar resentation   | 11 02020-3040  | Communication and Mitigation Strategies Related to the Leading Indicator   | Taylor   | onic   | Show i pointe Company, El   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9555   | of Pressure Cycle Fatigue  | Taylor   | Shie   | Shell Pipeline Company, LP  |
|  | Virtual Procentation  | 11 02020 0000  | Characterizing Corrosion Defects With Apparent High Growth Rates on  | Tuylor   | 01110  | enen i penne company, 1   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9572   | Transmission Pipelines   | Brent  | Ayton  | Integral Engineering  |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9575   | Continuing Development of Criteria to Quantify Metal-Loss Severity,  | Brian  | Leis   | B N Leis. Consultant Inc.   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9578   | Getting to Know Your Bends to Support Scc Management   | Fernando   | Merotto  | ROSEN   |
|  |   |  | Application of Noise Filtering Techniques for the Quantification of  |  |  |   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9580   | Uncertainty in Dent Strain Calculations  | Noah   | Ergezinger   | University of Alberta   |
|  |   |  | Full-Scale Pull Testing Study of the Mfl-a Performance Within Casings to   |  | 0 0  |   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9601   | Improve III-Based Corrosion Management of Cased Pipes  | Dongliang  | Lu   | TC Energy   |
|  |   |  |  |  |  | China University of Petroleum-  |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9616   | Axial Compressive Capacity of Pressurized Pipeline With Corrosion Defect   | Jinxu  | JIANG  | Beijing   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9621   | Microwave Chipless Resonator Strain Sensor for Pipeline Safety   | Masoud   | Baghelani  | University of Alberta   |
|  |   |  | Now You Scc Me, Now You Don't – Using Machine Learning to Find Stress  |  |  |   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9624   | Corrosion Cracking   | Michael  | Smith  | ROSEN GROUP   |
|  |   |  | Pipeline Plain Dent Fatigue Assessment: Shedding Light on the Api 579  |  |  |   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9655   | Level 2 Fatigue Assessment Methodology   | Zeyanb   | Shirband   | Stanetc Consulting Ltd  |
|  |   |  | Leveraging lot Telemetry to Improve the Tracking of Inline Inspection Tools  |  |  |   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9681   | for Oil and Gas Pipelines  | Vignesh  | Shankar  | PureHM  |
|  |   |  | Optimizing the Management of Excavation and Repair Data From Inline  |  |  |   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9683   | Inspection Programs  | Miaad  | Safari   | Enbridge Gas Distrubution   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9690   | A Data Driven Validation of a Defect Assessment Model and its Safe   | Shahani  | Kariyawasam  | Transcanada   |
|  |   |  | Burst Pressure Prediction of Pipes With Scc Colonies - Development of  |  |  |   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9693   | Intelligent Flaw Interaction Rules   | Bo   | Wang   | Center for Reliable Energy Systems  |
|  |   |  | Burst Pressure Prediction of Pipes With Scc Colonies - Evaluation of   |  |  |   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9696   | Intelligent Flaw Interaction Rules Using Full-Scale Burst Tests  | Bo   | Wang   | Center for Reliable Energy Systems  |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9705   | Full Scale Test Validation of Fatigue Crack Growth Rate of Flaws in Erw  | Aaron  | Dinovitzer   | BMT Fleet Technology  |
|  |   |  | Full-Scale Fatigue Testing of Crack-in-Dent and Framework Development  |  |  |   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9709   | for Life Prediction  | Udayasankar  | Arumugam   | Blade Ennergy Partners  |
|  |   |  | When Metals and Microbes Meet – Preventing Microbial Corrosion in Oil  |  |  |   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9746   | and Gas Transmission Pipelines   | Jennifer   | Sargent  | suez  |
|  |   |  | Generation and Monitoring of Synthetic Crack-Like Features in Pipeline   |  |  |   |
| Track 3: Pipeline and Facilities Integrity   | Virtual Presentation  | IPC2020-9781   | Materials Using Cyclic Pressure Loading  | Chris  | Alexander  | ADV Integrity, Inc.   |
| Track 3: Pipeline and Facilities Integrity   | Paper Only  | IPC2020-9281   | The Integrity Due Diligence Process for New Capital Assets   | Cristina   | Figueiredo   | Enbridge  |
|  |   |  | Concerted, Computing-Intense Novel Mfl Approach Ensuring Reliability   |  |  |   |
|  |   |  |  |  |  | DOOEN   |
| Track 3: Pipeline and Facilities Integrity   | Paper Only  | IPC2020-9361   | and Reducing the Need for Dig Verification   | Johannes   | Palmer   | ROSEN   |
|  |   |  | and Reducing the Need for Dig Verification<br>Inline Inspections in Lieu of Hydrostatic Testing for Low Frequency Erw  |  |  |   |
| Track 3: Pipeline and Facilities Integrity   | Paper Only  | IPC2020-9393   | and Reducing the Need for Dig Verification<br>Inline Inspections in Lieu of Hydrostatic Testing for Low Frequency Erw<br>Pipelines – Developments and Experiences in 12- and 22-Inches Pipelines   | Dr. Thomas   | Hennig   | NDT Global  |
| Track 3: Pipeline and Facilities Integrity<br>Track 3: Pipeline and Facilities Integrity   | Paper Only<br>Paper Only  | IPC2020-9393<br>IPC2020-9435   | and Reducing the Need for Dig Verification<br>Inline Inspections in Lieu of Hydrostatic Testing for Low Frequency Erw<br>Pipelines – Developments and Experiences in 12- and 22-Inches Pipelines<br>The Story of the Dent-Gouge Fracture Model   | Dr. Thomas<br>Andrew   | Hennig<br>Cosham   | NDT Global<br>Ninth Planet Engineering Limited  |
| Track 3: Pipeline and Facilities Integrity   | Paper Only  | IPC2020-9393   | and Reducing the Need for Dig Verification<br>Inline Inspections in Lieu of Hydrostatic Testing for Low Frequency Erw<br>Pipelines – Developments and Experiences in 12- and 22-Inches Pipelines<br>The Story of the Dent-Gouge Fracture Model<br>Pressure Reductions to Prevent Time-Delayed Failures in Damaged  | Dr. Thomas   | Hennig   | NDT Global  |
| Track 3: Pipeline and Facilities Integrity<br>Track 3: Pipeline and Facilities Integrity<br>Track 3: Pipeline and Facilities Integrity   | Paper Only<br>Paper Only<br>Paper Only<br>Paper Only  | IPC2020-9393<br>IPC2020-9435<br>IPC2020-9440   | and Reducing the Need for Dig Verification<br>Inline Inspections in Lieu of Hydrostatic Testing for Low Frequency Erw<br>Pipelines – Developments and Experiences in 12- and 22-Inches Pipelines<br>The Story of the Dent-Gouge Fracture Model<br>Pressure Reductions to Prevent Time-Delayed Failures in Damaged<br>Plausible Profile (Psqr) Corrosion Assessment Model: Refinement,  | Dr. Thomas<br>Andrew<br>Andrew   | Hennig<br>Cosham<br>Cosham   | NDT Global<br>Ninth Planet Engineering Limited<br>Ninth Planet Engineering Limited  |
| Track 3: Pipeline and Facilities Integrity<br>Track 3: Pipeline and Facilities Integrity   | Paper Only<br>Paper Only  | IPC2020-9393<br>IPC2020-9435   | and Reducing the Need for Dig Verification<br>Inline Inspections in Lieu of Hydrostatic Testing for Low Frequency Erw<br>Pipelines – Developments and Experiences in 12- and 22-Inches Pipelines<br>The Story of the Dent-Gouge Fracture Model<br>Pressure Reductions to Prevent Time-Delayed Failures in Damaged<br>Plausible Profile (Psqr) Corrosion Assessment Model: Refinement,<br>Validation and Operationalization   | Dr. Thomas<br>Andrew   | Hennig<br>Cosham   | NDT Global<br>Ninth Planet Engineering Limited  |
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|  |                       | I             | Dent Screening Criteria Based on Dent Restraint, Pipe Geometry and   |             |                        | 1                                   |
|--|-----------------------|---------------|--|-------------|------------------------|-------------------------------------|
| Track 3: Pipeline and Facilities Integrity         | Paper Only            | IPC2020-9703  | Operating Pressure   | Aaron       | Dinovitzer             | BMT Fleet Technology                |
| Track 3: Pipeline and Facilities Integrity         | Paper Only            | IPC2020-9724  | Dent Assessment and Management, Api Recommended Practice 1183  | Aaron       | Dinovitzer             | BMT Fleet Technology                |
| Track 3: Pipeline and Facilities Integrity         | Paper Only            | IPC2020-9767  | What Is the Leak Rate for a Liquid Slug Flowing Past a Side Branch?  | Colin       | Hartloper              | NOVA Chemicals                      |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9230  | Lessons Learned From Freespans at Pipeline Watercourse Crossings   | Gerald      | Ferris                 | BGC Engineering Inc.                |
|  |                       |               | Industrial Validation and Verification Approach for External Fiber Optic   | -           |                        |                                     |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9233  | Based Leak Detection   | Chris       | Minto                  | OptaSense Ltd                       |
|  |                       |               | Pipeline Rupture Detection Using Multiple Artificial Intelligence Classifiers  | -           |                        |                                     |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9237  | During Steady-State and Transient Operations   | Christopher | Macdonald              | University of Calgary               |
|  |                       |               | Sand Dune Migration Monitoring for Pipeline Hazard Risk Mitigation: The  | -           |                        | , , ,                               |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9247  | Peru Lng Coastal Section Case  | Fabien      | Ravet                  | Omnisens                            |
|  |                       |               | A Novel Three-Dimensional Non-Contact Pipeline Magnetism-Based   |             |                        | China University of                 |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9258  | Stress Inspection Technology and Its Application on Lng Pipeline   | Guoxi       | Не                     | Petroleum(Beijing)                  |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9260  | Enhancing Flooding Monitoring and Response to Improve Geohazard  | Peter       | Song                   | Enbridge Pipelines Inc              |
| ······································             |                       |               | An Integrated Approach to System-Wide Landslide Monitoring in the  |             |                        | g                                   |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9270  | Appalachian Basin Region of the Us   | Bailey      | Theriault              | Golder Associates                   |
| Track in operatione, mentering, and maintenance    | Virtual 1 1000mation  | 11 02020 0210 | Experimental Investigation of the Difference in Wax Deposition Aging Rate  | Dalloy      | mondan                 | China University of Petroleum,      |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9332  | Between Polyethylene and Steel Pipes   | Rongbin     | 11                     | Beijing                             |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9333  | Pipeline Leak Detection Using a Moderate Gain Nonlinear Observer   | Sergio      | Cunha                  | UERJ                                |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9355  | Leak Rate Testing of a Natural Pipeline Defect   | Bob         | Andrews                | ROSEN UK                            |
| Track 1. operations, wontoning, and wantenance     |                       |               | Employing Satellite-Based Hyperspectral Imagery for Pipeline Leak  | 505         | 7 41010 100            |                                     |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9369  | Prevention, Detection & Compliance   | R. Peter    | Weaver                 | Orbital Sidekick                    |
|  | VIIIudi Flesenialion  | IF 62020-9309 | The Study on Non-Heating Transportation of Carbon Dioxide Flooding   | N. Felei    | Weaver                 | China University of Petroleum       |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9405  | Gathering and Transportation Pipeline  | Xianwen     | Cheng                  | (Beijing)                           |
|  | Virtual Presentation  | IPC2020-9405  | A Hybrid Method Based on Svm Integrated Improved Pso Algorithm for   | Alanwen     | Cheng                  | China University of                 |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9434  | Electrical Energy Consumption Forecasting of Crude Oil Pipeline  | Lei         | Xu                     | Petroleum,Beijing                   |
| Track 4. Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9434  | Using Results of Western Canadian Flood Scour Assessments to Provide   | Lei         | Xu                     | Petroleum,Beljing                   |
| Track 4: Operational Manitoring, and Maintonanaa   | Virtual Dresentation  | 10000000450   | a Simple Screening Tool for Pipeline Watercourse Crossings   | Dishard     | Cuthrie                | Stantas                             |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9452  |  | Richard     | Guthrie                | Stantec                             |
| Track 4. Operations, Manitaring, and Maintananas   | Vistoral Descentation |               | Pipe Sleeve Repair Analysis Case Study Examining Axial Surface Cracks<br>With Pressure Reduction and Geometry Factors to Improve Remaining | 0           | The second shall Die D |                                     |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9461  |  | Greg        |                        | Quest Integrity USA, LLC            |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9463  | On-Water Liquid Leak Detection Technology Evaluation   | Chris       | Apps                   | C-FER Technologies                  |
| Torola 4. On continue. Manifestina and Maintenance |                       | 1000000 0 170 | Maop Reconfirmation for a 20 Inch Gas Pipeline Using the Eca Approach  | <u>.</u>    |                        | DOOFN                               |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9479  | and Enhanced IIi   | Simon       | Slater                 | ROSEN                               |
|  |                       |               | Establishing a Detection Threshold for Acoustic-Based External Leak  |             |                        |                                     |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9518  | Detection Systems  | Mathew      | Bussiere               | C-FER Technologies                  |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9525  | Evaluation and Acceptability of Pneumatic Pressure Test Results  | Guohua      | LI                     | DNV GL                              |
|  |                       |               | The North Saskatchewan River Valley Landslide – Slope and Pipeline   | a           |                        |                                     |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9532  | Condition Monitoring   | Chris       | Holliday               | ROSEN Canada Ltd                    |
|  |                       |               | A Method of Leakage Parameters Estimation for Liquid Pipelines Based on  |             |                        | China University of Petroleum-      |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9538  | Conditional Generative Adversarial Network   | Jianqin     | Zheng                  | Beijing                             |
|  |                       |               | Kalman Filter and Model-Free Adaptive Control Theory Applied to the  |             |                        | China University of Petroleum       |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9558  | Unsteady Flow State Estimation of Product Pipelines  | Lei         | He                     | Beijing                             |
|  |                       |               |  |             |                        | China University of Petroleum,      |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9565  | Numerical Simulation of Petroleum Spreading in a Complex River Channel   | Ji          | Wang                   | Beijing                             |
|  |                       |               | Large Standoff Magnetometry as a Practical Screening and Monitoring  |             |                        |                                     |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9584  | Tool for Pipelines Under Geohazard Condtions   | Tianzong    | Xu                     | Pacific Gas & Electric              |
|  |                       |               | Surface Loading Analysis: Vehicle Load Distribution Under Timber Mats  |             |                        |                                     |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9599  | and Flexible Slab  | Benjamin    | Zand                   | RSI Pipeline Solutions, LLC         |
|  |                       |               | A Novel Approach for Two-Stage Uav Path Planning in Pipeline Network   |             |                        | China University of Petroleum-      |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9604  | Inspection   | Rui         | Qiu                    | Beijing                             |
|  |                       | 1.            | The Application of Numerical Simulation to Liquid Pipeline Leakage at Lng  |             |                        | China University of Petroleum-      |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9636  | Terminal in China  | Zhichao     | Guo                    | Beijing                             |
|  |                       | 1.            | Case Study of Team Approach to Geohazard Identification,   |             | 1                      |                                     |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9641  | Characterization, and Mitigation   | Josh        | Nasrallah              | Golder Associates                   |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9675  | Preserving Critical Stormwater Storage Assets at Pipeline Terminal   | Vincent     | Huang                  | Wood                                |
|  |                       |               | Research Progress of Sand Transport Mechanism and Critical Conditions  |             |                        | China University of Petroleum (East |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9722  | in Pipelines   | Yuanpeng    | You                    | China)                              |
|  |                       |               | Identification and Mitigation of a Landslide Threatening an Operating  |             |                        |                                     |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation  | IPC2020-9743  | Natural Gas Pipeline   | Amir        | Ahmadipur              | Geosyntec Consultants, Inc.         |
|  |                       |               |  |             |                        |                                     |

## Sheet1

|  | 1  | Т                            | Repair of Leaks in Thin-Wall High Pressure Pipelines Using Composite   | 1              |                          |  |
|--|--|------------------------------|--|----------------|--------------------------|--|
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation                         | IPC2020-9757                 | Reinforcing Technologies   | Chris          | Alexander                | ADV Integrity, Inc.                          |
| Track 4. Operations, Monitoring, and Maintenance   | VIIIual Flesentation                         | IFC2020-9757                 | Use of Spoolable Pipe Technologies as a Means for Rehabilitating Small   | Chins          | Alexander                | ADV Integrity, Inc.                          |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation                         | IPC2020-9785                 | Diameter High Pressure Pipeline Systems  | Chris          | Alexander                | ADV Integrity, Inc.                          |
| Track 4: Operations, Monitoring, and Maintenance   | Virtual Presentation                         | IPC2020-9786                 | Operational Modal Response Characterization of a Buried Pipe Structure   | Haobin         | Chen                     | university of calgary                        |
| Track 4. Operations, Monitoring, and Maintenance   | VIIIudi Fieseillalloit                       | IF C2020-9700                | Advances in Purging a Pipeline Section Containing a Side-Deadleg: Field  | Пабріп         | Chen                     |  |
| Track 4: Operations, Monitoring, and Maintenance   | Paper Only                                   | IPC2020-9226                 | Measurements vs. 1d Interfacial Purging Model  | Kamal          | Botros                   | Nova Husky Res Corp                          |
| Track 4: Operations, Monitoring, and Maintenance   | Paper Only                                   | IPC2020-9220                 | Pipeline Depth of Cover – Can You Demonstrate Compliance?  | Daniel         | Finley                   | ROSEN(UK)                                    |
| Track 4. Operations, Monitoring, and Maintenance   |  | 11 02020-3420                | Study on Intelligent Controller Design of Flow Metrological Verification   | Daniel         | тппеу                    | China University of Petroleum-               |
| Track 4: Operations, Monitoring, and Maintenance   | Paper Only                                   | IPC2020-9557                 | System   | Xiong          | Yin                      | Beijing                                      |
| That 4. Operations, Monitoring, and Maintenance  |  | 11 02020-3001                | Deer Mountain Case Study: Integration of Pipe and Ground Monitoring  | Xiong          | 1.01                     | Deljing                                      |
| Track 4: Operations, Monitoring, and Maintenance   | Paper Only                                   | IPC2020-9613                 | Data With Historical Information to Develop a Landslide Management Plan  | loel           | Babcock                  | Pembina Pipeline Corporation                 |
| That is operatione, monitoring, and maintenance  |  | 11 02020-3010                |  | 0001           | Babcock                  | China University of                          |
|  |  |                              | Oil Temperature Prediction of Long-Distance Hot-Oil Pipeline Based on Ga   |                |                          | Petroleum/Pipechina Oil & Gas                |
| Track 4: Operations, Monitoring, and Maintenance   | Paper Only                                   | IPC2020-9634                 | Bp Optimization  | Тао            | Yu                       | Pipeline Control Center                      |
| ridok i: Oporationo, Morikonnig, and Maintonanoo   |  | 11 02020 0001                |  | 140            | 14                       | Center for Reliable Energy System            |
| Track 4: Operations, Monitoring, and Maintenance   | Paper Only                                   | IPC2020-9717                 | Structured Response Plan After a Ground Movement Event   | Yong-Yi        | Wang                     | (Track Chair)                                |
| Track 4: Operations, Monitoring, and Maintenance   | Paper Only                                   | IPC2020-9751                 | The Use of Remote Real-Time Gnss to Monitor a Pipeline in an Active  | Jan            | Bracic                   | Pembina Pipeline Corporation                 |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9731                 | Negligible Crack Growth Thresholds   | Lyndon         | Lamborn                  | Enbridge Liquids Pipelines                   |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9240                 | Estimating Toughness for Lf and Dc Welded Erw Seams  | John           | Kiefner                  | Retired                                      |
| Track 5. Materials and Johning   | VIIIudi Fieseillalloit                       | IF 02020-9233                | Repair and Reinforcement of Blunt Defects on Pipeline Bends Using  | JOIIII         | Neme                     | Retired                                      |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9290                 | Composite Materials  | Paul           | Hill                     | Team Industrial Services Inc                 |
| Track 5. Materials and Joining   | VIIIudi Fieseiliduoli                        | IF 62020-9290                | Effects of Niobium on Microstructure and Hardness of Coarse Grained Haz  | Faui           | 1 1111                   | Team industrial Services Inc                 |
| Track 5: Materials and Joining   | Virtual Drecontation                         | IPC2020-9323                 | of High Strength X70 Grade Uoe Linepipe Steel  | Toro           | Ki <del>n</del> u        | lanan  |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9323                 | Crack Initiation and Propagation in Static Loaded Fracture Mechanics   | Taro           | Kizu                     | Japan  |
| Track 5: Materials and Jaining   | Virtual Dresentation                         | 1000000 0054                 | Tests in Steels Containing Atomic Hydrogen   | Dhilinna       | Maara                    | TWI Ltd                                      |
| Track 5: Materials and Joining<br>Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9354                 |  | Philippa       | Moore                    | B N Leis, Consultant Inc.                    |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9403                 | The Effects of the Flow Response on the Failure Pressure of Line Pipe  | Brian          | Leis                     | Bin Leis, Consultant Inc.                    |
| Touch C. Mataiala and Islaidan   |  |                              | Cross-Sectional Grain Size Homogeneity Effect on Structural Steel Fatigue  | <b>_</b>       | o                        | DOO Matallumia al Oslutiana da a             |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9404                 | Performance in Air and Hydrogen Environments   | Douglas        | Stalheim                 | DGS Metallurgical Solutions, Inc.            |
| Terrels F. Materials and Islams  |  | 1000000 0407                 | Ring Expansion Testing Innovations – Hydraulic Clamping and Strain   |                |                          |  |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9407                 | Measurement Methods  | William        | Walsh                    | EN Engineering                               |
| Terrels F. Materials and Islams  |  |                              | Application of the Cohesive Zone Model to Crack Tip Opening Angle  | <i>\t</i> :    |                          |  |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9410                 | Design Methodology for Ductile Fracture in Pipeline Steels   | Xin            | Wang                     | Xin Wang                                     |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9421                 | An Empirical Fracture Control Model for Dense-Phase Co2 Carrying   | Guillaume      | Michal                   | University of Wollongong                     |
|  |  |                              |  |                | 0.11                     | ExxonMobil Upstream Integrated               |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9444                 | Improving Reliability of Carbon Steel Girth Welds in Sour Environment  | Harpreet       | Sidhar                   | Solutions Company                            |
|  |  |                              | Electromagnetic Induction Post Heating to Reduce Nde Delay Times of  |                |                          |  |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9497                 | Welded In-Service Repairs  | Liam           | Hagel                    | Stantec                                      |
|  |  |                              | Separation Characteristics of an X65 Linepipe Steel From Laboratory-   |                |                          |  |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9545                 | Scale to Full-Scale Fracture Tests   | Bradley        | Davis                    | University of Wollongong                     |
|  |  |                              | Influence of Small Volumetric Flaws on the Measurement of Crack Growth   |                |                          |  |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9582                 | and Tearing Resistance in Sent Tests.  | Vitor          | Adriano                  | UGent  |
|  |  |                              | An Approach to Establishing Manufacturing Process and Vintage of Line  |                |                          |  |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9589                 | Pipe Using In-Situ Nondestructive Examination and Historical   | Nathan         | Switzner                 | RSI-PS                                       |
|  |  |                              | Role of Crystallographic Texture on Toughness of Erw Welded and Heat-  |                |                          |  |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9596                 | Treated Api X70 Pipeline Steel   | Neil           | Anderson                 | Evraz North America                          |
|  |  |                              | Insight on Fracture Toughness and Predicted Failure Pressure for Vintage   |                |                          |  |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9602                 | Erw Seam Defects   | Scott          | Riccardella              | Structural Integrity Associates, Inc.        |
|  |  |                              | The Use of Optimized Erw Techniques to Improve Low Temperature   |                |                          |  |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9649                 | Fracture Toughness of Welded Pipe  | Muhammad       | Rashid                   | Evraz NA                                     |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9687                 | Austenite Grain Size Control During Welding of Line Pipe Steels  | Nicolas        | Romualdi                 | The University of British Columbia           |
|  |  |                              | A Quantitative Index to Assess the Influence of Joint Fit-Up on Pipeline   |                |                          |  |
|  |  |                              |  | La ave a la la | 1 -                      | University of Alberta                        |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9706                 | Weld Root Discontinuities  | Mitchell       | Grams                    | University of Alberta                        |
| 5  | Virtual Presentation<br>Virtual Presentation | IPC2020-9706<br>IPC2020-9710 | Weld Root Discontinuities<br>Heat Affected Zone Softening Susceptibility Test  | Aaron          | Grams<br>Dinovitzer      | BMT Fleet Technology                         |
| Track 5: Materials and Joining   |  |                              |  |                | -                        |  |
| Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9710                 | Heat Affected Zone Softening Susceptibility Test   | Aaron          | Dinovitzer               | BMT Fleet Technology                         |
| Track 5: Materials and Joining<br>Track 5: Materials and Joining   | Virtual Presentation                         | IPC2020-9710                 | Heat Affected Zone Softening Susceptibility Test<br>Weld Hydrogen Cracking Susceptibility  | Aaron          | Dinovitzer               | BMT Fleet Technology                         |
| Track 5: Materials and Joining<br>Track 5: Materials and Joining<br>Track 5: Materials and Joining<br>Track 5: Materials and Joining | Virtual Presentation<br>Virtual Presentation | IPC2020-9710<br>IPC2020-9712 | Heat Affected Zone Softening Susceptibility Test<br>Weld Hydrogen Cracking Susceptibility<br>Influence of Steel Chemistry and Field Girth Welding Procedure on | Aaron<br>Aaron | Dinovitzer<br>Dinovitzer | BMT Fleet Technology<br>BMT Fleet Technology |

|                                 |                        |               | Pipeline Fracture Control Concepts for Norwegian Offshore Carbon            | 1                |               |                                     |
|---------------------------------|------------------------|---------------|---|------------------|---------------|-------------------------------------|
| Track 5: Materials and Joining  | Virtual Presentation   | IPC2020-9766  | Capture and Storage   | Kenneth          | Macdonald     | University of Stavanger             |
| Track 5. Materials and Soliting | VIItual Flesentation   | IF C2020-9700 | Evaluation of Hydrogen Induced Cracking Resistance of X70 Pipeline Stee     |                  | Wacuunaiu     |                                     |
| Track 5: Materials and Joining  | Virtual Presentation   | IPC2020-9787  | Under Severe and Mild Sour Service Conditions Using Ultrasonic Analysis     |                  | Wiskel        | Univ Of Alberta                     |
|                                 | VIItual Flesentation   | IF C2020-9707 | Undermatching and Low Strain In-Service Failures in X70 Line Pipe:          | J. Daily         | VVISKEI       |                                     |
| Track 5: Materials and Joining  | Bapar Only             | IPC2020-9241  | Contributions From Standards. Specifications and Coating                    | Loigh            | Eletebor      | Retired                             |
|                                 | Paper Only             | IPC2020-9241  | Influence of Natural Gas Pipeline Explosion on Material Performance of      | Leigh            | Fletcher      | China University of Petroleum       |
| Track 5: Materials and Joining  | Paper Only             | IPC2020-9295  | X80 Steel Pipe Laid in One Ditch  | Jiatong          | Ling          | (beijing)                           |
|                                 | Paper Only             | IPC2020-9295  | Recent Progress in Development of Fracture Arrest Methodology Based or      |                  | Ling          | (beijing)                           |
| Track 5: Materials and Joining  | Dener Ork              | IPC2020-9299  | Ctoa: Test Standard, Transferability and Methodology                        | Su               | <b>V</b>      | CanmetMATERIALS                     |
|                                 | Paper Only             | IFC2020-9299  | Effect of Cooling Process on Microstructure Especially Precipitation        | Su               | Xu            | CanifietiwiATERIALS                 |
| Track 5: Materials and Joining  | Paper Only             | IPC2020-9401  | Behavior of High-Strength Pipeline Steel                                    | Hesong           | Zhang         | Shougang Group                      |
|                                 | Faper Only             | IPC2020-9401  | Comparison Between Yield Strength Results Obtained From Methods             | Hesolig          | Zhang         | Shougang Group                      |
| Track 5: Materials and Joining  | Paper Only             | IPC2020-9429  | Using Both Flattened and Non-Flattened Specimens                            | Pratham          | Nayyar        | Berg Pipe                           |
| Track 5: Materials and Joining  | Paper Only             | IPC2020-9429  | Full-Scale Step-Load-Hold Tests on X65 and X70 Line Pipe Steels             | Andrew           | Cosham        | Ninth Planet Engineering Limited    |
|                                 | Faper Only             | IF C2020-9430 | Full-Scale Step-Load-Hold Tests of X03 and X70 Life Fipe Steels             | Anulew           | COSHAIII      | Center For Reliable Energy          |
| Track 5: Materials and Joining  | Paper Only             | IPC2020-9658  | Mechanical Properties of Vintage Girth Welds                                | Dan              | Jia           | Systems                             |
| Track 5. Materials and Johning  | Paper Only             | IPC2020-9658  | iviechanical Properties of Vintage Girtin Weids                             | Dan              | Jia           | Systems                             |
| Track 5: Materials and Joining  | Banar Only             | IPC2020-9685  | Rational Limits of High-Low Misalignment in Girth Welds                     | Panglin          | Liu           | Center for Reliable Energy Systems  |
|                                 | Paper Only             | IFC2020-9005  | Microstructure Transformation and Mechanical Properties of X80 Large        | Banglin          | Liu           | China Petroleum Pipeline Research   |
| Track 5: Materials and Joining  | Paper Only             | IPC2020-9741  | Diameter Thick Wall Induction Heating Bend for Low Temperature Service      | VII              | Liu           | Institute                           |
| Track 5. Materials and Joining  | Paper Only             | IPC2020-9741  | A Comparative Study for Improving Fracture Toughness Test Methods           | YU               | Liu           | Institute                           |
| Track 5: Materials and Joining  | Dener Ork              |               | Using Sent Specimens  | Xian-Kui         | Zhu           | Savannah River Research Lab         |
|                                 | Paper Only             | IPC2020-9776  | Plastic Constraint-Matched Pin-Loaded Sent Specimen for Fracture            | Alan-Kui         | Znu           | Savannan River Research Lab         |
| Track 5: Materials and Joining  | Paper Only             | IPC2020-9789  | Analysis of Radially Growing Longitudinal Cracks in Thin-Walled Piping      | lavan            | Furmanski     | Exxon Mobil                         |
| Track 6: Strain Based Design    | Virtual Presentation   | IPC2020-9789  | A Case Study of Predicting Tensile Strain Capacity of In-Service Pipelines  | Jevan<br>Junfang | Lu            | Enbridge Inc.                       |
| Track 6: Strain Based Design    | Virtual Presentation   | IPC2020-9310  | Effects of Profile Data Grid on Deformation Capacity of Line Pipes          | Kanako           | Asano         | JFE Engineering Corporation         |
|                                 | VIItual Presentation   | IFC2020-9319  | An Improved Analytical Strain Analysis Method for Buried Steel Pipelines    | Kallaku          | Asano         | China University Of                 |
| Track 6: Strain Based Design    | Virtual Dresentation   | IPC2020-9341  | Subjected to Permanent Ground Displacement                                  | Xiaoben          | Liu           | Petroleum(Beijing)                  |
| Track 6. Strain Based Design    | Virtual Presentation   | IPC2020-9341  | Papua New Guinea Earthquake Proves the Value of Robust Pipeline             | Alaoben          | Liu           | Felioleun(Beljing)                  |
| Track 6: Strain Based Design    | Virtual Presentation   | IPC2020-9376  | Materials Selection and Construction  | Mario            | Macia         | Exxonmobil Development Co.          |
|                                 | VIItual Presentation   | IFC2020-9370  | Earthquake in Papua New Guinea Results in New Concept for Securing          | Mano             | Iviacia       | ILF Consulting Engineers Austria    |
| Track 6: Strain Based Design    | Virtual Presentation   | IPC2020-9471  | Pipelines in Ridgeline Right-of-Way: the Micropile Contiguous Wall          | Christoph        | Ladenhauf     | Gmbh                                |
| Track 6. Strain Based Design    | VIItual Presentation   | IPC2020-9471  | High-Pressure Natural Gas Pipeline in Geohazardous Region of Papua          | Christoph        | Lauennaui     | GIIDI                               |
| Track 6: Strain Based Design    | Virtual Presentation   | IPC2020-9473  | New Guinea Sustains M 7.5 Earthquake: Key Factors of Successful             | Robert           | Albrecht      | Exxonmobil Dev Co                   |
|                                 | VIItual Flesentation   | IF C2020-9473 | Returning Pipelines to Service Following a M 7.5 Earthquake: Papua New      | Robert           | Abrecht       |                                     |
| Track 6: Strain Based Design    | Virtual Presentation   | IPC2020-9492  | Guinea Experience   | Robert           | Albrecht      | Exxonmobil Dev Co                   |
|                                 | VIItual Flesentation   | IF 62020-9492 | Failure Analysis of Buried X65 Steel Pipeline Under the Influence of        | Robert           | Abrecht       | China University of Petroleum-      |
| Track 6: Strain Based Design    | Virtual Presentation   | IPC2020-9546  | Permafrost Thawing Settlement Based on Moisture-Heat-Stress Coupled         | Jinxu            | JIANG         | Beijing                             |
| Hack 0. Strain based besign     | VIItual Flesentation   | IF C2020-9540 | Theoretical Formula for Determining the Maximum Straight Length of a        | JIIIXu           | JIANG         | Deijilig                            |
| Track 6: Strain Based Design    | Virtual Presentation   | IPC2020-9617  | Buried Pipeline That Can Prevent Seismic Buckling                           | Shoma            | Onuki         | Tokyo Gas                           |
| Track 0. Strain based besign    | VIItual Flesentation   | IF C2020-9017 |   | Shoma            | Oliuki        | Tokyo Gas                           |
| Track 6: Strain Based Design    | Virtual Presentation   | IPC2020-9664  | Estimation of Tensile Strain Capacity of Vintage Girth Welds                | Banglin          | Liu           | Center for Reliable Energy Systems  |
| Track of offair Based Beergh    | Virtuar resentation    | 11 02020-3004 |   | Dangin           |               | Center for Reliable Energy Systems  |
| Track 6: Strain Based Design    | Virtual Presentation   | IPC2020-9739  | Management of Ground Movement Hazards – an Overview of a Jip                | Yong-Yi          | Wang          | (Track Chair)                       |
| Hack C. Chair Based Booign      | Virtuar i rescritation | 1 02020-3703  | Recommended Procedures for Evaluation and Synthesis of Pipelines            | Tong-TT          | Wang          |                                     |
| Track 6: Strain Based Design    | Paper Only             | IPC2020-9235  | Subject to Multiple Imu Tool Surveys  | James            | Hart          | SSD, Inc.                           |
| Huok o. oliulii Buoou Boolgii   |                        | 11 02020-3200 | Rapid Strain Demand Estimation of Pipelines Deformed by Lateral Gourd       | barries          | Tidit         | 66B, iiio.                          |
| Track 6: Strain Based Design    | Paper Only             | IPC2020-9259  | Movements   | Ali              | Fathi         | Enbridge                            |
| Hadit O. Oliain Based Besign    |                        | 11 02020-3203 | Development of Soil Restraints for Buried Pipelines in Muskeg Soils         | 730              | raun          | Elibridge                           |
| Track 6: Strain Based Design    | Paper Only             | IPC2020-9384  | Subject to Lateral Ground Displacements                                     | Dharma           | Wijewickreme  | University of British Columbia      |
| Hadit O. Oliain Based Besign    |                        | 11 02020-3004 | Preventing Girth Weld Failure in Large Diameter Pipelines: Measurement      | Dhanna           | Wijewickreine | enversity of British Columbia       |
| Track 6: Strain Based Design    | Paper Only             | IPC2020-9551  | of Loads and Application of Assessment Methods                              | Andy             | Young         | rosen                               |
| Tuon o. Otrain Dabou Debign     |                        |               | Effects of Biaxial Loading on the Tensile Strain Capacity of Girth Welds    | , andy           | loung         |                                     |
| Track 6: Strain Based Design    | Paper Only             | IPC2020-9663  | With Weld Strength Undermatching and Haz Softening                          | Banglin          | Liu           | Center for Reliable Energy Systems  |
| Huok o. Oliain Babou Bobigh     |                        | 11 02020-3003 |   | Dangin           |               | Conter for Reliable Energy Oysterns |
| Track 6: Strain Based Design    | Paper Only             | IPC2020-9678  | A Review of Pipe-Soil Interaction Models for Strain Demand Estimation       | Dunji            | Yu            | Center for Reliable Energy Systems  |
| Track 7: Risk and Reliability   | Virtual Presentation   | IPC2020-9070  | Probabilistic Digital Twin for Risk Assessment Transmission Pipelines       | Francois         | Ayello        | DNV GL                              |
| Track 7: Risk and Reliability   | Virtual Presentation   | IPC2020-9240  | Application of Risk and Reliability in Designing Facility Site Containment  | MD Anthony       | Payoe         | Enbridge                            |
|                                 | VIItuari rescritation  |               | Approaction of Flock and Reliability in Designing Facility Offe Containment | mb Analony       | . 4,00        | Libridgo                            |

## Track 7: Risk and Reliabilitv IPC2020-9274 Safety Risk Acceptance Criteria for Pipelines C-FER Technologies Virtual Presentation Maher Nessim C-FER Technologies Track 7: Risk and Reliability IPC2020-9278 Hazardous Liquid Pipeline Spill Volumes Virtual Presentation Tyler Paxman Track 7: Risk and Reliability Virtual Presentation IPC2020-9314 Surviving Population Reliability Projection Methods Lamborn Enbridge Liquids Pipelines Lyndon Track 7: Risk and Reliability IPC2020-9367 Reliability Performance Benchmarks for Low Vapor Pressure Liquid Integral Engineering Virtual Presentation Thomas Dessein Track 7: Risk and Reliability Quantifying Risk to Optimize Facility Integrity Management Virtual Presentation IPC2020-9459 Alex Nemeth Enbridge Inc. Recommendations for Jet Fire Model Selection When Performing Track 7: Risk and Reliability Virtual Presentation IPC2020-9483 Consequence Assessments of Onshore Natural Gas Pipelines and Shawn Smith Integral Engineering Track 7: Risk and Reliability Virtual Presentation Reliability-Based Crack Threat Assessment and Management TC Energy IPC2020-9484 Yan Jason Stress Corrosion Cracking "Like-in-Kind" Reliability Approach for Pipelines Track 7: Risk and Reliability Virtual Presentation IPC2020-9500 Without Crack Tool In-Line Inspection Dan Williams Dynamic Risk Comparison of a Standard Reliability-Based Approach and a Bayesian C-FER Technologies Network Approach for Integrity Management of a Northern Canadian Track 7: Risk and Reliability Virtual Presentation IPC2020-9504 Smitha Koduru Demonstration of Limit States Design Method for Assessment of Corrosion Track 7: Risk and Reliability Virtual Presentation IPC2020-9517 and Crack Features Riski Adianto C-FER Technologies Intelligent Prevention Method for Third-Party Damage of Long-Distance China University of Petroleum Jiatong Track 7: Risk and Reliability Virtual Presentation IPC2020-9556 Pipeline Based on Mobile Devices Location Information (beijing) Ling Track 7: Risk and Reliability IPC2020-9586 Subset Simulation for Structural Reliability Analysis of Pipeline Corrosion Virtual Presentation Darvl Bandstra Integral Engineering Reliability-Based Assessment Method for Pipelines Buried at Fault China University of Petroleum Track 7: Risk and Reliability Virtual Presentation IPC2020-9609 Crossings Kai Wu (Beijing) Into Multi-Parameter Decision Making Scenarios: A New Look at Optimizing Utility Functions Enbridge Pipelines Inc. Track 7: Risk and Reliability Virtual Presentation IPC2020-9726 Mona Abdolrazaghi Track 7: Risk and Reliability Virtual Presentation IPC2020-9738 Asset Complexity Based Benchmarks in Support of Reliability Martin Di Blasi Enbridge Pipelines Inc Model for Estimating the Probability of Failure at River Crossings Track 7: Risk and Reliability Virtual Presentation IPC2020-9788 Millan Sen Enbridge Pipelines Inc. National Transportation Safety Understanding Risks: Natural Gas Distribution Piping in the United States Track 7: Risk and Reliability Paper Only IPC2020-9238 Sara Lvons Board Time Dependent Reliability Analysis for Oil and Gas Pipelines: A Bayesian Track 7: Risk and Reliability IPC2020-9284 Spectral Analysis Based Deterioration Model Balekelayi University of British Columbia Paper Only Ngandu A Novel Approach to Risk Management of Below Ground Natural Gas Migration From Leaks on Low-Pressure Pipelines Track 7: Risk and Reliability Paper Only IPC2020-9480 Kimberly Maddin TC Energy Practical Considerations in the Assessment of Safety Risks Associated Track 7: Risk and Reliability With Large Gas Transmission Pipeline Systems TC Energy IPC2020-9507 Paper Only Dongliang Lu China University of Petroleum. Numerical Analysis of the Mechanical Behaviors of Nonmetal Unbonded Track 8: Northern, Offshore and Production Pipelines Virtual Presentation IPC2020-9346 Flexible Pipe Under Combined Load Baodong Wang Beijing China University of Petroleum-Beijing Hydrate Formation in Water-in-Oil Emulsions in the Presence of Resins Track 8: Northern, Offshore and Production Pipelines Virtual Presentation IPC2020-9350 Dongxu Zhang China University of Petroleum IPC2020-9351 Track 8: Northern, Offshore and Production Pipelines Virtual Presentation The Coarse Particle Influence on the Strength of Wax Deposition Xun Zhang (Beijing) Investigation Four-Phase Multi-Component Flow Techniques in Horizontal Track 8: Northern, Offshore and Production Pipelines Memorial University Virtual Presentation IPC2020-9436 and Sub-Sea Pipelines Mohamed Odan Research on Virtual Metering System of Offshore Oilfield Based on Multi-CHINA UNIVERSITY OF PETROLEUM Track 8: Northern, Offshore and Production Pipelines Virtual Presentation IPC2020-9542 Level Electrical Submersible Pump Zonghan Bai Establishment and Application of the Pipeline Monitoring System in Track 8: Northern, Offshore and Production Pipelines Virtual Presentation IPC2020-9547 Permafrost Regions in China PetroChina Pipeline Company Liu Jianping Study on the Distribution of Submarine Pipeline Corrosion Defects Based China University of on Internal Inspection Data and Data Mining Method Track 8: Northern, Offshore and Production Pipelines Virtual Presentation IPC2020-9567 Guoxi He Petroleum(Beijing) A Coupled Thermo-Hydro-Mechanical Model for Capturing Frost Heave Under Chilled Gas Pipelines Track 8: Northern, Offshore and Production Pipelines Virtual Presentation IPC2020-9597 SeonHona Na McMaster University The Influence of Burial Depth and Soil Thermal Conductivity on Heat Track 8: Northern, Offshore and Production Pipelines Virtual Presentation IPC2020-9695 Transfer in Buried Co2 Pipelines for Ccs: A Parametric Study Babafemi Olugunwa University of Strathclyde Hydrostatic Collapse Tests of Full-Scale Pipeline Specimens With Paper Only PUC-RIO Track 8: Northern, Offshore and Production Pipelines IPC2020-9562 Thickness Metal Loss Jose Freire