

Program

ENG2WINE: Industry Challenges and Innovative Engineering Solutions

March 22 - 26, 2026

Porto, Portugal

Conference Co-Chairs

David E. Block

University of California Davis, USA

Dominik Durner

University of Applied Sciences Kaiserslautern, Germany

Dimple K Kundiyana

Gallo, USA



Engineering Conferences International

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Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program, originally established in 1962, that provides opportunities for the exploration of problems and issues of concern to engineers and scientists from many disciplines.

ECI BOARD MEMBERS

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Chetan Goudar

Peter Gray

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ECI Conferences Manager: Tressa D'Ottavio

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Kleopatra Chira, Université de Bordeaux Institut des Sciences de la Vigne et du Vin,
France

António Silva Ferreira, Catholic University of Porto, Portugal

Marc Alton, Alton Farms Estate Winery, Canada

Linn Hobbs, Massachusetts Institute of Technology, USA

Boris Suprina Petrovic, Felice D. Errico Srl. Italy

Conference Sponsors

Agrovin

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Cork Supply

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Hamilton

Lallemand Oenology

Niepoort Cellars

Sogrape

Tomsa Destil

Taylor Fladgate

Sunday, March 22, 2026

16:30 – 18:00	Conference check in (Ballroom foyer)
18:00 – 19:00	Welcome reception (CUSCO Bar, 3 rd Floor)
19:00 – 21:30	Dinner (CUSCO Bar, 3 rd Floor)

NOTES

- *Technical Sessions will be in Ballroom I. Poster sessions will be in Ballroom II.*
- *Speakers will be available for additional discussion at the poster session on the day of their presentation.*
- *Meals on Monday through Thursday will be in the main restaurant, except for Tuesday lunch in the ballroom foyer.*
- *The ECI office is in Ballroom II.*
- *Audiotaping, videotaping and photography of presentations are prohibited.*
- *Speakers – Please have your presentation loaded onto the conference computer prior to the session start (preferably the day before).*
- *Speakers – Please leave at least 3 minutes for questions. Extended discussion will take place at the poster session*
- *Please do not smoke at any conference functions.*
- *Turn your cellular telephones to vibrate or off during technical sessions.*

Monday March 23, 2026

- 07:00 – 08:30 Breakfast buffet
- 08:30 – 08:45 Opening Remarks
- 08:45 – 09:15 **Keynote 1**
From soil to sip - Engineering value from nature's variability
António Graça, Sogrape Vinhos, Portugal
- Session 1: VIT2Eng**
Session Chairs: TBD
- 09:15 – 09:30 **110 Controlled irrigation with artificial intelligence for improving vineyard crop quality and productivity**
Daniel Ruiz Beamonte, CIRCE, UPC, Spain
- 9:30 – 9:45 **P109 Hyperspectral phenolics: Exploring the covariation between leaf and berry reflectance and berry chemistry**
Alexandra Basquette, UC Davis, USA
- Session 2: WINE2Eng**
Session Chairs: TBD
- 9:45 – 10:00 **134 Optimizing alcoholic fermentation through automated nutrient management and liquid yeast derivatives**
Maryam Ehsani, Fermentis, USA
- 10:00 – 10:15 **121 Impact of fermentation redox management on polyfunctional thiols in model wine**
Julian Döbler, Weincampus, Germany
- 10:15 – 10:45 Coffee Break
- 10:45 – 11:00 **105 From spectrum to signature: Toward port wine authentication with AI**
António Ferreira, ESB-UCP CSP, Portugal
- 11:00 – 11:15 **108 Climate change - Red wines in Germany are taking advantage**
Herbert Klapperich, TU BAF/CiF e. V., Germany
- 11:15 – 11:30 **131 Predicting free SO₂ in white wines with portable cyclic voltammetry for smarter SO₂ management**
Leonardo Vanzo, University of Verona, Italy
- 11:30 – 11:45 **120 Impacts of vineyard site and fermentation temperature on phenolics extraction of cabernet sauvignon wines**
Ron Runnebaum, UC Davis, USA

Monday March 23, 2026 (continued)

12:00 – 13:30 Lunch

14:15 Meet promptly in lobby to board bus for visit to Cork Supply

14:30 – 17:30 **Visit to Cork Supply**

From the forest to the bottle, Cork Supply, a Certified B Corporation, is committed to the UN's Sustainable Development Goals by harvesting premium corks for the future. They have a specialized team of forestry professionals who work with producers from the main cork forest regions to implement advanced forest management programs. They focus on mitigating and adapting to climate change, the protection of biodiversity and ecosystems as well as pollution prevention. Founded in 1981 in California by Jochen Michalski, the company has expanded worldwide and offers a full range of cork-based enclosures of the highest quality.

17:30 – 19:00 **Visit to the Niepoort Cellars**

Short walking distance from the Hilton Porto Gaia Hotel. With more than 150 years dedicated to Port wine, the Niepoort cellars are the guardians of knowledge that has been passed from generation to generation. This exclusive tour will bring conference participants to an authentic experience – from the cobwebs to the constant aroma of port, we will be on a journey through the Niepoort temple, stopping by the small lab (“casinha”) and ending in the sample room.

19:00 – 20:30 Dinner

20:30 – 22:30 Poster Session / Social Networking

Poster only presentation

P102 Exploring green-labeled wine produced by non-saccharomyces yeasts: Validation by photonics and metabolomic approaches using SPME-GC-MS

António Silva Ferreira, Universidade Católica Portuguesa, Portugal

Tuesday March 24, 2026

- 07:00 – 08:30 Breakfast buffet
- 08:30 – 09:00 **Keynote 2**
From nature to performance: Exploring and harnessing yeast biodiversity to unlock next generation fermentation for a changing wine world
Jessica Noble, Lallemand SAS, France
- Session 3: PKG2Eng**
Session Chairs: TBD
- 09:00 – 09:15 **109 "Wine goes underground" - Experiences with storage facilities in shallow caverns**
Herbert Klapperich, TU BAF/CiF e. V., Germany
- 09:15 – 09:30 **106 Oxygen management in wine: Deep learning and imaging-based control of cork oxygen transmission rate**
António Ferreira, CSP, ESB-UCP, Portugal
- 09:30 – 09:45 **130 Predictive modeling of must and wine oxidation based on electrochemical data**
Leonardo Vanzo, University of Verona, Italy
- 09:45 – 10:00 **138 Benefits of utilizing oxidation-reduction potential (ORP) sensing technology for improved fermentation control in production winemaking**
Harve' Straub, Hamilton Company, Switzerland
- 10:00 – 10:15 **137 Innovative CO₂ management and sustainable recovery technologies for the beverage industry**
Miguel Villena Reyes, Tomsa Destil, Spain
- 10:15 – 10:30 **136 Innovations in no/lo alcohol beverage production and ClearAlc technology**
Silvia Cedeño, Bevzero, USA
- 10:30 – 10:45 **104 Production ready processing pipeline for generating 3D digital twin representation of natural cork bottle stoppers**
António Cesar Silva Ferreira, Universidade Católica Portuguesa, Portugal
- 11:00 – 11:30 Light Stand-up Lunch
- 11:45 – 19:00 **Excursion – Douro Valley and Niepoort Douro Estate**

Bus ride with guide of approximately 1.5 hours. Having first appeared in historical records in 1756, Quinta de Napoles is one of the oldest wine estates in the Douro wine region and enjoys ideal conditions for producing Douro DOC wines which are fresh, elegant, with extraordinarily complex aromatic profiles. Under fifth-generation leader, Dirk Niepoort, the estate comprises 15 hectares of North-facing vineyards, situated at altitudes between 80 and 250 meters above sea level, on the left bank of the Tedo River. They focus on indigenous grape varieties, sustainable practices, and memorable wines. Dirk Niepoort is

Tuesday March 24, 2026 (continued)

(Excursion description continued)

known for a minimal-intervention approach, often using traditional lagares (stone tanks) for foot-trodden grapes. Wine tasting included.

19:00 – 20:30

Dinner

20:30 – 22:30

Poster Session / Social Networking

Wednesday March 25, 2026

- 07:00 – 08:30 Breakfast buffet
- 08:30 – 09:00 **Keynote 3**
Sustainability from grape to glass: European and US-American perspectives
David E. Block, University of California Davis, USA; and Dominik Durner, Hochschule Kaiserslautern, Germany
- Session 4: INNOV2Eng**
Session Chairs: TBD
- 09:00 – 09:15 **126 Simulated moving bed – A novel technology for preferential separation of sugars for low alcohol wine and grape sugar concentrations manufacturing**
Dimple Kundiyana, Gallo, USA
- 09:15 – 09:30 **122 Glycolipids as a novel method to arrest alcoholic fermentation for obtaining wines with residual sugar**
Nicola Rossi, Weincampus Neustadt, Germany
- 09:30 – 09:45 **135 Extraction of the maximum potential of the grape by ultrasound**
David Mendoza, Agrovin, Spain
- 09:45 – 10:00 **123 Comparison of the principal production methods for dealcoholized wine based on analytical parameters**
Lorenzo Italiano, Hochschule Geisenheim University, Germany
- 10:00 – 10:15 **103 Wine remediation: Selective adsorption of free volatile phenols in smoke-tainted wines**
Connor Patton, UC Davis, USA
- 10:15 – 10:45 Coffee Break
- Session 5: VALADD2Eng**
Session Chairs: TBD
- 10:45 – 11:00 **102 Recovery of biomolecules from winemaking by-products: A path towards circular economy in the wine industry**
Maria Norberta de Pinho, Universidade de Lisboa, Portugal
- 11:00 – 11:15 **116 Clean-in-Place (CIP) implementation in wineries to reduce water and chemical use**
Brooke Fanale, UC Davis, USA
- 11:15 – 11:30 **111 A wireless sensor network architecture for monitoring water usage in wineries**
James Nelson, UC Davis, USA
- 11:30 – 11:45 **127 Generation of clean hydrogen using winery waste via microbial electrolysis**
Alex Lewis, Electro-Active Technologies, Inc., USA

Wednesday March 25, 2026 (continued)

11:45 – 12:00 **124 Technological integration of CO₂ recovery and aroma valorization for sustainable operations in small and medium wineries**
Felipe Salinas Bonich, Geisenheim University, Germany

12:00 – 13:30 Lunch

Session 6: OTHER2Eng

Session Chairs: TBD

13:30 – 13:45 **132 In Vino Veritas: Teaching wine appreciation to MIT engineers for 3 decades**
Linn Hobbs, Massachusetts Institute of Technology, USA

13:45 – 14:00 **133 From reactive to predictive: Preventing failures through engineering and non-destructive testing**
Joshua Jackson, US Corrosion Services, USA

14:00 – 15:00 Poster Session with Coffee Break

15:30 – 19:00 **Visit to Taylor Fladgate and World of Wines (WOW)**

Promptly meet at the hotel lobby where a WOW representative will accompany the group on a short walk to WOW. Half the group will visit Taylor's Port Wine Cellar and experience a Port Wine and Chocolate Tasting, while the other half of the group will visit the Wine Experience Museum. The groups will then swap. Taylor Fladgate, now in its fourth century, recently renovated its 300-year-old cellars to incorporate a modern and innovative museum. There will be free time to experience the World of Wines area in Vila Nova de Gaia – the largest cultural district in the world dedicated to wine.

19:30 – 22:00 Conference Banquet

Thursday March 26, 2026

07:00 – 10:00 Breakfast buffet
 Departures

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Pre-conference Participants List

Full Name	Affiliation	Email	Country	OCC
Alexandra Basquette	UC Davis	azbasquette@ucdavis.edu	United States	Graduate Student
Franco Berruti	ICFAR - Western University	fberruti@uwo.ca	Canada	Academic
David Block	University of California, Davis		United States	Academic
Silvia Cedeño	BevZero	silvia@bevzero.com	Spain	Industry
Maria Norberta De Pinho	Instituto Superior Tecnico	marianpinho@tecnico.ulisboa.pt	Portugal	Academic
Julian Doeblner	Weincampus Neustadt	julian.doeblner@dlr.rlp.de	Germany	Academic
Anthony Dufour	CNRS Nancy	Anthony.Dufour@univ-lorraine.fr	France	Academic
Dominik Durner	Weincampus Neustadt	dominik.durner@hs-kl.de	Germany	Academic
Maryam Ehsani	Fermentis SI Lesaffre	m.ehsani@fermentis.lesaffre.com	France	Industry
Brooke Fanale	University of California, Davis	bmfanale@ucdavis.edu	United States	Graduate Student
Barbara Hickernell	Engineering Conferences International	Barbara@engconfintl.org	United States	Other
Linn Hobbs	Massachusetts Institute of Technology		United States	Academic
Lorenzo Italiano	Hochschule Geisenheim University	lorenzo.italiano@hs-gm.de	Germany	Academic
Joshua Jackson	US Corrosion Services	josh@uscorrosion.com	United States	Industry
Herbert Klapperich	Retired		Germany	Academic
Dimple Kundiyana	Gallo	dimple.kundiyana@ejgallo.com	United States	Industry
Alex Lewis	Electro-Active Technologies, Inc.	alewis@electroactive.tech	United States	Industry
James Nelson	University of California, Davis	jjnel@ucdavis.edu	United States	Academic
Mohammad Nemshah	King Khalid University	Mnemshah@outlook.com	Saudi Arabia	Academic
Jessica Noble	Lallemand Oenology	jnoble@lallemand.com	France	Industry
Connor Patton	University of California, Davis	cqpatton@ucdavis.edu	United States	Graduate Student
Nicola Rossi	Weincampus Neustadt		Germany	Academic

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Full Name	Affiliation	Email	Country	OCC
Ron Runnebaum	UC Davis	rcrunnebaum@ucdavis.edu	United States	Academic
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Carmelo Santos Otero	Hamilton	csantos@hamilton.ch	Spain	Industry
Nancy Bieber Savage	Engineering Conferences International	nancy@engconfintl.org	United States	Other
David Sommer	BarrelWise Technologies	david@barrelwise.ca	Canada	Industry
Hervé Straub	Hamilton Company	HStraub@hamilton.ch	Switzerland	Industry
Leonardo Vanzo	University of Verona	leonardo.vanzo@univr.it	Italy	Academic
Miguel Villena Reyes	Tomsa Destil		Spain	Industry

Upcoming ECI Conferences

2026

DELIVERY OF NUCLEIC ACID THERAPEUTICS III: BIOLOGY, ENGINEERING AND DEVELOPMENT

April 8 – 12, 2026

L. Sepp-Lorenzino, Intellia Therapeutics; S. F. Dowdy, University of California San Diego School of Medicine; M. Stanton, Generational Bio
Croatia

VACCINE TECHNOLOGY X

April 12-17, 2026

T. Tagmyer, PATH; N. Alteras, Moderna; S. Frank, UCL; D. Cowley, AstraZeneca
Porto, Portugal

NANOTECHNOLOGY IN MEDICINE V: PHYSICAL TRIGGERS AND ADVANCED MATERIALS

April 19-23, 2026

R. Fernandes, George Washington University; J. Nguyen, University of North Carolina at Chapel Hill; A. Schroeder, Technion
Giardini Naxos, Messina, Sicily, Italy

WASTELCA 5: NEW TOOLS FOR LIFE CYCLE SUSTAINABILITY ASSESSMENT OF MUNICIPAL AND CHALLENGING WASTE MANAGEMENT

June 7 – 12, 2026

U. Arena, University of Campania “Luigi Vanvitelli”, Italy; A. Damgaard, DTU, Denmark; M. Materazzi, UCL, UK; F. Ardolino, University of Campania “Luigi Vanvitelli”, Italy
Cetraro (Calabria), Italy

BIOCHEMICAL AND MOLECULAR ENGINEERING XXIV

July 19 – 23, 2026

D. Tullman-Ercek, Northwestern University; M. Blenner, University of Delaware; A. Lewis, Moderna
Puerto Rico

CHEMREC II – THERMOCHEMICAL RECYCLING OF PLASTICS

September 13 – 17, 2026

M. Pilar Ruiz, Maastricht University; S/ Kersten, University of Twente; E. Heeres, University of Groningen
Porto, Portugal

NANOMECHANICAL TESTING IN MATERIALS RESEARCH AND DEVELOPMENT X

October 4 – 9, 2026

Verena Maier-Kiener, Montan Universität Leoben, Austria
Rhodes, Greece

SINGLE USE TECHNOLOGIES VIII

October 12 – 15, 2026

N. Montenay, Sartorius; G. Gillespie, North Carolina State University; P. Smith, GSK
Montreal, P.Q., Canada

BIOLOGICAL, PHARMACEUTICAL AND COSMETIC COMPLEX FLUIDS IV

October 25 – 30, 2026

S. Amin, University of Miami
Calabria, Italy

Upcoming ECI Conferences

2027

MICROBIAL ENGINEERING IV

February 14 – 18, 2027

E. Keshavarz-Moore, University College London; T. Sauer, Sanofi; D. Dikicioglu, University College London
Malta

CELL CULTURE ENGINEERING XX

May 1-7, 2027

Inn Yuk, Genentech/Roche; M. Antoniewicz, University of Michigan; N. Abu-Absi, Abbvie
Quebec City, Canada

BIO-CHAR V

May TBA, 2027

J. Lehmann, Cornell University; M.R. Acocella, University of Salerno; O. Masek, University of Edinburgh;
N. Klinghoffer, Western University
Giardini Naxos, Sicily, Italy

INNOVATIVE MATERIALS & METHODS FOR ADDITIVE MANUFACTURING IV (IM2AM)

June 6-11, 2027

B. Compton; University of Tennessee, Knoxville
Espoo, Finland

ADVANCES IN OPTICS FOR BIOTECHNOLOGY, MEDICINE AND SURGERY IX

June 13-17, 2027

T. Durduran, IFCO; B. Choi, University of California Irvine; J. Ramella-Roman, Florida International University
Castelldefels, Spain

MICRO- AND NANOPLASTICS IN WATER: CHARACTERIZATION, CURE AND PREVENTION II

July TBA, 2027

D. Hunkeler, Aqua+Tech
Davos, Switzerland

PYROLIQ IV – 2027: PYROLYSIS AND LIQUEFACTION OF BIOMASS AND WASTES

September TBA, 2027

P. Biller, Aarhus University; B. DeCaprariis, Spaienza University of Rome; M. Garcia-Perez, Washington State University

INTEGRATED CONTINUOUS BIOMANUFACTURING VIII

TBA 2027

M. Brower, Merck; E. Gefroh, JustBio-Evotec; T. Villiger, University of Applied Sciences and Arts Northwestern Switzerland

INTERNATIONAL HYDROGEN CONFERENCE: UNDERSTANDING HYDROGEN-MATERIALS INTERACTIONS

October 3 – 7, 2027

M. Martin, NIST; J. Burns, University of Virginia
Whitefish, MT

ENZYME ENGINEERING XXIX

October TBA, 2027

J. Lewis, Indiana University; E. Master, University of Toronto; M. Kerr, Eli Lilly
Eastern Canada

Engineering Conferences International

Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program that has served the engineering/scientific community since 1962 as successor program to Engineering Foundation Conferences. ECI has received recognition as a 501(c)3 organization by the U.S. Internal Revenue Service and is incorporated in the State of New York as a not-for-profit corporation.

The program has been developed and is overseen by volunteers both on the international Board of Directors and international Conferences Committee. More than 1,900 conferences have taken place to date. The conferences program is administered by a professional staff and the conferences are designed to be self-supporting.

ECI Mission

To serve the engineering/scientific community with international, interdisciplinary, leading edge engineering research conferences

ECI Purposes

The advancement of engineering arts and sciences by providing a forum for the discussion of advances in the field of science and engineering for the good of mankind by identification and administration of international interdisciplinary conferences

To work with engineering, scientific and social science societies and the interested general public to jointly sponsor conferences and to take other actions that will foster complementary programming.

To initiate conferences that will have a significant impact on engineering education, research practice and/or development.

ECI Encouragement of New Conference Topics

The ECI Conferences Committee invites you to suggest topics and leaders for additional conferences and encourages you to submit a proposal for an ECI conference.

Ideally, proposals should be submitted from 18 to 24 months in advance of the conference although the staff can work on a shorter timeline.

The traditional format for an ECI conference is registration Sunday afternoon with technical sessions held each morning and evening through Thursday or Friday noon. Afternoons are used for informal gatherings, poster sessions, field trips, subgroup meetings and relaxation. This format has served well to build important professional networks in many areas.

ECI welcomes proposals for shorter conferences and for conferences which span weekends in order to reduce the number of working days participants are away from their offices.

ECI Works With You

ECI works with conference chairs in two complementary ways. First, an experienced member of the Conferences Committee acts as your technical liaison from the proposal stage through the conference itself. He or she is always available to consult with you on any conference issue.

Second, after your proposal has been approved by the Conferences Committee, the ECI staff will assume responsibility for the administration of the conference.

Your primary responsibilities will be recruiting the organizing committee, developing the technical program and securing third-party funding necessary to support the travel of key speakers.

The responsibilities of ECI's "full service" staff include -- but are not limited to -- the following:

- Recommend, negotiate, contract and make substantial deposits for housing, meals, meeting space, A/V equipment and tours.
- Maintain web sites for the conference and for submission of abstracts.
- Publicize via electronic and print media.
- Administer all finances including grants, contributions and purchase orders. (ECI makes grant funds available as soon as a grant is approved.) There is no need for chairs to set up a conference bank account or file tax returns for their conference.
- Process all applications and registrations.
- Produce bound program/abstracts book.
- Contract for the publication of print or electronic proceedings, if any.
- Provide on-site staff during the conference.

For more information, please contact the ECI Director at Barbara@engconfintl.org