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## Pressure Vessels & Piping Division Newsletter

H.A. Bouzid, Editor

Spring 2018

### A Message from the PVP Division Chair



Maher Y.A. Younan

The primary mission of the Pressure Vessels and Piping Division (PVPD) is to provide a forum to the engineering and scientific communities to promote, share and disseminate state-of-the-art pressure technologies, relating to the power, petrochemical and process industries, and sustainable and alternative energies.

The annual PVP conference is one of the key forums where engineers and researchers dealing with Pressure Vessels and Piping Technologies, can meet to exchange information and ideas. Each year hundreds of volunteers are involved in organizing the PVP conference by authoring, and reviewing technical papers. Many volunteers are involved in organizing technical and panel sessions, tutorials, and workshops. Many of the conference papers are also published in the Journal of Pressure Vessels Technology.

The Division has developed strong technical relations with local and international communities through sharing and disseminating knowledge with industry and academia. This helps in the promotion, and development of the Pressure Vessels and Piping Industry.

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### A Message from the Conference Chair



Pierre Mertiny

Preparations for the 2018 Pressure Vessels and Piping Conference (PVP-2018) are well underway. From the 15th to the 20th of July 2018 the pressure vessels and piping community will gather in Prague, Czech Republic, to exchange knowledge and share experiences in diverse topics related to pressure vessels and piping technologies. PVP-2018 promises to be a truly international event living up to this year's Conference theme "Promoting Excellence in the Global Pressure Vessel and Piping Industry". The Conference will be held at the award-winning and modern Hilton Prague Hotel. The hotel offers an impressive list of amenities and is located between the business district and the historic Old Town, with Prague's major attractions nearby. Registration for the hotel and the Conference can be made through the Conference website at <https://www.asme.org/events/pvp>

The Pressure Vessels & Piping Division is the primary sponsor of PVP-2018, with additional participation by the ASME Nondestructive Evaluation, Diagnosis and Prognosis Division (NDPD). General topics include: (1) Codes & Standards; (2)

Computer Technology & Bolted Joints; (3) Design & Analysis; (4) Fluid-Structure Interaction; (5) High Pressure Technology; (6) Materials & Fabrication; (7) Operations, Applications, & Components; (8) Seismic Engineering; (9) Non-Destructive Examination; and (10) the Rudy Scavuzzo Student Paper Competition and Symposium.

We received over 700 technical papers and over 80 technical presentations that will be arranged in more than 180 paper and panel sessions. On Sunday, July 15, activities for our Early Career Engineers and Students will lead out the Conference, including a team building event, a 'Primer to ASME VIII-1' special tutorial, and an afternoon reception. In addition, Sunday afternoon will feature a Special Tutorial on 'Navigating Corporate Culture for Professional Advancement', which will be given by Dr. Ike Ezekoye. I should mention that Sunday is also the day of the final game of the 2018 FIFA World Cup, and we expect that many Conference attendees will want to watch and enjoy this match while being in soccer-crazy Europe.

Conference Technical Sessions, the Technology Demonstration Forum, and the 25th Rudy Scavuzzo Student Paper Symposium and Competition will commence on Monday, July 16. In the morning we are looking forward to the Opening Reception, which highlights two complementary keynotes on "Critical challenges facing nuclear pow-

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## Division Chair Message

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One of the key objectives of the division is the focus on students and early career engineers. The Rudy Scavuzzo student paper competition encourages B.Sc. M.Sc., and Ph.D. students to get engaged in the division. Every year special events are arranged for early career engineers. These also include tutorials and workshops to help the young engineers grow and develop in their careers. Young engineers are looked upon as the future of the division.

Our PVP 2018 conference in Prague, Czech Republic, July 15-20, 2018 promises to be another excellent meeting "Promoting Excellence in the Global Pressure Vessels and Piping Industry". Besides the large amount of technical papers and presentations, tutorials, and workshops planned, there are several unique events that are planned for this conference. These include a photopoly, codes and standards appreciation, two workshops, and special tutorials for early career engineers. The PVP 2018 conference is led by Pierre Mertiny as the Chair and Hakim Bouzid as the Technical Program Chair.

One of the PVPD key points of strength is the dedication, commitment, and family spirit of its volunteer members of the Division Leadership Team (DLT) and the great support the division gets from ASME staff. The ASME-PVPD is seeking to become the "Go to Organization" for Pressure Vessels and Piping Technology.

Please come and join us in Prague to celebrate the 52<sup>nd</sup> year of the ASME-PVP conference.

*Maher Y.A. Younan  
PVPD Chair*

## Conference Chair Message

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er plants in US in a diverse power environments" and "Impact of renewable energy generation on fossil fuel power plants - challenges of flexibility considering fatigue and creep-fatigue". On Monday evening we will welcome all Conference attendees

and their guests to the Opening Reception.

Conference attendees can expect a full week of activities. Technical Sessions will run through Thursday. In response to feedback that we received during past PVP events we made it a priority for PVP-2018 to promote networking and offer opportunities for the exchange of ideas between attendees coming from industry and academia from around the globe. Offering

diverse opportunities for professional growth is certainly an objective for PVP-2018. To that end, Technical Tutorials will again be part of the Conference program. At PVP-2018 the following three Technical Tutorials will be offered: (I) 'Brittle Fracture Assessment Involving Auto-Refrigeration and Toughness Rules from ASME BPVC Section VIII', (II) 'Fracture Mechanics Applications to Piping, and (III) 'Practical Fatigue Analysis'. ASME staff is currently finalizing an outstanding social program that will allow participants to explore some of the regional attractions at a reasonable cost. Another Conference highlight will certainly be the Awards Gala, which will take place at the Hilton Prague Hotel in the evening of Wednesday July 18.

PVP-2018 will feature two Workshops running Thursday July 19 to Friday July 20. Following two highly praised workshops at PVP-2016 and PVP-2017, EPRI will again offer an Expert Workshop, which this year will be on 'Creep Continuum Damage Models for Structural Mechanics'. In addition, XP-RESILIENCE will host the '1st International Workshop on Risk and Resilience of Industrial Installations Against Natural Threats and Mitigation Strategies'. Information on these Workshops is available on the Conference website, where attendees will soon be able to also register for these Workshops as well.

The Team of Conference organizers is committed to making PVP-2018 a memorable and high-value event for our attendees. Please come and join us in Prague. I would be delighted to welcome and meet you at the 2018 Pressure Vessels and Piping Conference.

*Pierre Mertiny  
PVP-2018 Conference Chair*

## A Message from the PVP Division Senate



*Doug A. Scarth*

**T**he Rudy Scavuzzo Student Paper Symposium and 26th Annual PVP Division Student Paper Competition, to be held at the 2018 PVP Conference in Prague, Czech Republic, are well underway. The rules and procedures for this year's Symposium and Competition are provided on the Conference web site.

Again this year, all finalists are required to produce a poster that will be displayed at the annual Conference-wide reception held on Monday evening of the Conference. Once the finalists have been determined, they will be notified of the required poster size and other details. Locating the poster session as part of

Monday evening reception provides an excellent opportunity for the Conference attendees to recognize and honor the student authors, and for the authors to discuss their work. This year there is a total of 27 draft papers in the Student Paper Competition. There are 10 draft papers in the BS/MS category, and 17 draft papers in the PhD category. The submitted papers have student authors from nine different countries in Asia, Europe and North America.

In each category, up to eight finalists may be selected. I would like to thank the student authors for their efforts to participate in the Student Paper Competition.

I look forward to seeing you in Prague.

*Douglas A. Scarth  
Chair, PVP Division Senate Operations*

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## PVP Honors and Awards Report



*Trevor G. Seipp*

**A**fter the success of the 2017 Conference Honors and Awards Luau, we are again planning to host an evening Honors and Awards Gala at the 2018 Conference in Prague.

And based on your feedback, we are again looking at providing entertainment during the Gala – we hope that you are looking forward in as much anticipation as we are.

As in previous years, the recipient of the ASME S.Y. Zamrik Pressure Vessels & Piping Medal for 2018 has been decided and notified. However, the recipient will be revealed with the publication of the 2018 Conference Program.

Nominations for the other awards are ongoing and as we have done for the past three years, we will announce the recipients via the PVP LinkedIn Group. So, please follow the PVP Division on Twitter @asme\_pvp and in the LinkedIn Group “ASME-PVP Pressure Vessels and Piping Division” for updates on the 2018 conference.

This will also be my last Honors & Awards Report, as I will be handing the reins to a very capable and trustworthy colleague, Clay Rodery. Please join me in welcoming Clay to Division Leadership Team and the Honors & Awards Committee.

*Trevor G. Seipp*

*Chair, PVPD Honors & Awards Committee*

## PVPD Programs Report



*Matt R. Feldman*

**M**y name is Matt Feldman and I am honored to serve as your ASME Pressure Vessel and Piping (PVP) Division Programs Chair. Your PVP Division Leadership Team (DLT) has been hard at

work developing plans for upcoming conferences. As I assume you are aware, this year’s PVP conference will be held in Prague, Czech Republic July 15 -20 at the Hilton Prague. Prague is truly a world-class city whose amazing architecture was

spared the bombs of World War II. But location is certainly not the only reason to attend this year’s conference, as the conference will feature more than 180 paper and panel sessions, tutorials, a Technology Demonstration Forum, as well as the 25th annual Rudy Scavuzzo Student Paper Competition. For those of you that have attended past PVP conference in Europe, you are aware that while our 10 general topic areas are the same (Codes and Standards, Computer Technology and Bolted Joints, Design and Analysis, Fluid Structure Interaction, High Pressure Technology, Materials and Fabrication, Operations, Applications, and Components, Seismic Engineering, Non-Destructive Examination, and the Student Paper Competition), the focus of the sessions in these areas tends to shift. I have never been able to put my finger on it exactly, but our past conferences in Paris and Prague were unique and seemed to put a fresh spin on the PVP experience. If you have not before experienced a PVP in Europe, I strongly encourage you to attend this year’s event.

As mentioned earlier, the DLT continues to plan well into the future for upcoming conferences. Recently, the DLT adopted a planned rotation for future conferences in which we will have 3 consecutive conferences in North America and the fourth conference will be “somewhere else”. That means that the 2019, 2020, and 2021 PVP Conferences will be in North America and the 2022 conference will be outside of North America. So, for those of you that prefer North American conferences, or find it hard to receive travel approval when the conference is held elsewhere, the next three years should be easier for you to attend.

In 2019, the conference will be held in San Antonio, TX. Those of you who attended the past PVP in this great city will recall the cool of the famous San Antonio Riverwalk – a path that runs along a detour of the San Antonio River that is bordered by all sorts of eating establishments and hotels as well as other interesting businesses. The running water and shade of the trees and buildings along the walk provides keeps the heat off during what is otherwise a very hot time of year in San Antonio. Just a short distance from the Riverwalk you can visit the Alamo one of the most historic places in all of America. You can bet that

San Antonio is a world-class city that will comfortably host the world-class 2019 ASME PVP conference.

In 2020, the conference will be in Minneapolis, MN. With an average high temperature of 84 deg. F (29 deg. C) the July weather in the Twin Cities (along with neighboring St. Paul) should be pleasant for detours to explore the downtown area surrounding the host hotel. It’s easy to access Minnesota Twins baseball as they play at Target Field located in the heart of the city. However, should a heatwave hit during conference week, the Mall of America is fully air-conditioned and is waiting to give shoppers a one of a kind retail experience.

Sites for 2021 and 2022 are currently being planned. As mentioned above, 2021 will be a North American site while 2022 will be hosted somewhere outside of North America. As plans for these conferences are finalized, your DLT will keep informed. Regardless of the sites chosen, you can count on upcoming ASME PVP conferences to provide you with paper and panel sessions as well as tutorials, networking opportunities, and vendor input that will give you a technical edge in your career endeavors that cannot be found elsewhere. I look forward to seeing you there!

Thanks!

*Matt Feldman*

*2018 PVP Program Chair*

## PVPD Professional Development Report



*Maher Y.A. Younan*

**T**he PVPD is celebrating its 52nd anniversary in 2018. The division is celebrating its continuous commitment to the development of the engineering

profession in general and in the pressure vessel and piping area in particular. As part of this continuing commitment, the division is arranging one special tutorial and three technical tutorials in its PVP 2018 conference. Several of these tutorials reflect the development in the corresponding industry over the last 52 years. Attendees of the special, and technical tutorials receive a certificate.

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## PVPD Professional Development Report

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One of the key emphasis in 2018 professional development is the focus on early career engineers. Besides what is described in the Conference Chair message, (I assume you or Pierre will describe the activities related to early careers in your section), a Special Tutorial on “Navigating Corporate Culture for Professional Advancement” is prepared and will be presented by L. Ike Ezekoye. Many engineers (early and mid-career) sometimes feel that they are not going anywhere professionally. Basically, their capabilities and contributions are often not recognized nor adequately compensated. Some, occasionally, wonder whether they are in the right place. Perhaps, the grass must be greener somewhere else. This tutorial explores the personal and corporate roadblocks that can limit professional advancement of engineers in their chosen fields. It covers the art of belonging and of selling your capabilities to your supervisor or manager. The workshop will also cover corporate mentoring and other areas such as participation in Codes and Standards like the ASME Boiler and Pressure Vessel Code development and associated technical divisions of the ASME.

Ike Ezekoye, is a consulting engineer at Ezekoye Engineering Services LLC, and recipient of the PVP 2015 S. Y. Zamrik Medal. He has over 40 years of experience on valves for the nuclear power industry, and has mentored tens of engineers in the corporations in which he was employed over the years.

The first Technical Tutorial is on, “Brittle Fracture Assessment Involving Auto-Refrigeration and Toughness Rules from ASME BPVC Section VIII”. Brittle fracture can result in catastrophic damages as witnessed in multiple events recorded by the petrochemical industry. Fracture toughness is the material property that is commonly referred as the measure of any material’s resistance to such fractures. Carbon steel materials that are commonly used in the industry have been known to exhibit significantly lower toughness at lower temperatures including but not limited to low ambient temperature and lower metal temperatures resulting from process excursions which were not originally considered

during the design phase. One of such process excursion is termed as “auto-refrigeration,” wherein a process fluid changes phase from liquid to gas resulting in significantly lower temperature of the fluid and in turn the metal that contains the fluid. In this tutorial, the presenter will discuss the basics of brittle fracture, its effect on the petrochemical industry, the toughness rules in BPVC that are commonly used to prevent such fractures, auto-refrigeration, other common excursion events, and the assessment methods to protect the assets from an excursion event. This tutorial has been prepared by Kannan Subramanian, of Stress Engineering Services. He is an expert in pressure vessel design and fabrication, piping design and routing, pipe supports analysis during the engineering and construction phases of petroleum product industries.

The second technical tutorial will be on, “Fracture Mechanics Applications to Piping”. Fracture mechanics has been applied to plant piping and pipelines for flaw evaluation (assessment of an actual flaw found in service) and flaw tolerance evaluations (will leak-before-break behavior occur). This technology has evolved over the decades considerably from the early assumptions of brittle fracture using linear elastic fracture mechanics. This tutorial will show the developments over time and various current technical aspects for modern flaw evaluation/flaw tolerance analyses. The tutorial is targeted for those new to flaw assessment/tolerance analyses, and also provides some overview of methodologies for those willing to undertake advanced applications. This tutorial includes five modules over a ½ day session:

Module 1: Background on fundamental aspects of fracture mechanics, and historical developments

Module 2: Subcritical crack growth analyses and considerations

Module 3: Material toughness/strength conditions

Module 4: Failure modes and criteria for flawed pipes under quasi-static loading assumptions

Module 5: Failure modes and criteria for flawed pipes under dynamic loading

The tutorial leaders are Gery Wilkowski and Bud Brust – of Emc2, Columbus, Ohio 4322. They both have a very large experience in Piping Design and Analysis

The third Technical Tutorial is titled, “Practical Fatigue Analysis”. This technical tutorial provides an overview of basic & advanced fatigue analysis and implementation of these methods in life cycle calculation. This tutorial also aims at providing details of fatigue analysis methods in standards such as ASME Sec VIII Div-3, API-579 and DNV RP-C203. The topics to be covered in this tutorial are basics of stress, strain and constitutive equations, stress transformation, stress based (SN) fatigue analysis, strain based (eN) fatigue analysis, factors affecting fatigue life, low cycle and high cycle fatigue, mean stress effects, stress and strain controlled fatigue testing, weld fatigue analysis using nominal stress and effective notch stress method, proportional and non-proportional loading, multiaxial stress and strain based fatigue analysis methods such as Findley and Brown & Miller using critical plane search method. This tutorial is designed for students, beginners and users with experience in fatigue analysis. The tutorial Leader is Kumarswamy Karpanan who is a Specialist Engineer, Multiphysics Technology R&D in TechnipFMC

Maher Y. A. Younan

PVP Division Chair, and 2018 Professional

## PVPD Communications Report



Hakim A. Bouzid

All papers presented at the PVP-2017 Conference were published on a CD that was distributed to the Conference attendees in their registration packets. In addition to the CD, an ISO batch download of the PVP2017 conference proceedings are made available to you through the conference papers online site at the URL <https://asme.pinetec.com/pvp2017/index.html>.

The site will be available for download till July 31, 2018. If you need assistance to login or require more time to complete your download, please contact ASME at [toolboxhelp@asme.org](mailto:toolboxhelp@asme.org).

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## PVPD Communications Report

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Eight paper volumes of the PVP-2017 Conference Proceedings were also published after the Conference. These print volumes are:

- Codes & Standards (Parts A & B)
- Computer Technology & Bolted Joints
- Design & Analysis
- Fluid-Structure Interaction
- High-Pressure Technology, ASME NDE Division, 26th Scavuzzo Student Paper Symposium & Competition, EPRI Creep Fatigue Workshop
- Materials and Fabrication (Parts A & B)
- Operations, Applications, & Components
- Seismic Engineering

Thank you to all who have worked so hard to develop the PVP-2017 program and to all the authors for their contributions. The volumes of the PVP-2016 Conference Proceedings include pages recognizing the dedication and the outstanding effort of the Track Organizers and Session Organizers, who contribute countless hours to the development of the PVP Conference sessions.

The PVPD Newsletter is published twice a year in Fall/Winter and in Spring. All articles of interest to the PVP community are welcome. To submit an article to the PVPD Newsletter, please contact the PVPD communication chair Hakim A. Bouzid at [hakim.bouzid@etsmtl.ca](mailto:hakim.bouzid@etsmtl.ca).

Hakim A. Bouzid  
Chair, PVPD Communications

## Journal of Pressure Vessel Technology



Young W. Kwon

In order to maintain the quality of any journal, the review process is very critical. Reviewers are the unsung heroes or heroines of the journal. So as to recognize their contributions to the journals, ASME journals started to publish reviewers' names every year. The first issue of each calendar year includes the names of the reviewers who have contributed for the previous year. The February issue of 2018

JPVT has the list of more than 200 reviewers. Among them, one or two reviewers were selected as the Reviewer(s) of the Year based the number of papers reviewed, timely return of reviews, quality of reviews, etc. The 2017 Reviewers of the Year are Michel Pettigrew and David Weaver. Congratulations and many thanks to them!

The JPVT has been the flagship journal for the pressure vessels and piping industry. The journal has played a key role in supporting ASME Codes and Standards. The papers published in JPVT have provided the technical basis for setting the Codes and Standards. In that aspect, the journal has a unique status compared to other academic oriented journals.

The number of papers submitted to JPVT has increased steadily. For CY2017, 270 papers were submitted to JPVT. During the last two and half months of CY2018, about 60 papers have been submitted to the journal.

Two special topics are in progress. One of them is 'Collection of the state-of-art review papers', while the other is 'Na-tech risk assessment methodologies and mitigation solutions in the process industries'. Both topics are planned to be published near the end of this calendar year.

Andrew Duncan has joined the journal as a new Associate Editor. His expertise on fracture and materials science would be beneficial to the journal because those are very common topics of the papers published in the journal.

The JPVT publishes not only research papers but also design innovation and technology review papers. All papers should be submitted to <http://journaltool.asme.org/Content/index.cfm> to be considered for publication in the journal.

As always, I would like to express my sincere appreciations to Authors, Reviewers, Associate Editors, and ASME Staff for their contributions to the journal. They are the core of the journal.

Young W. Kwon  
JPVT Editor

## PVPD Membership Report



Bing Li

PVPD membership as defined as the primary Technical Interest of members in the ASME database. There are currently 37 Technical Divisions/Institutes within ASME and the PVPD is the 6th largest representing 4.3% of total ASME membership. The Division has increased in membership by 16.4% during past year, growing to 3568 members as of January 2018 up from 3061 members last January. It should be noted that ASME as a whole has increased its membership by 19.3% to 83402 over last year, and hence, the PVPD portion has dropped to 4.3% from 4.4%.

Members who have no technical division on file is 11.1% of total ASME membership. In order to grow our membership, it is important to communicate to new and existing ASME members to select "Pressure Vessels and Piping" as their PRIMARY Technical Interest within the ASME.org website. In addition, the ASME Referral Drive is currently ongoing. The ASME Referral Drive is your opportunity to share the value of an ASME Membership with your friends and colleagues, and receive free gifts in the process! Participate and take pride in knowing you are supporting ASME and the vital role it plays in promoting the art, science and practice of engineering around the globe. The benefits of ASME membership have increased greatly over the last few years. Just one such benefit is, the ASME Digital Collection, it is an immense, searchable database of hundreds of eBooks, over 60,000 technical papers from conference proceedings & journals and, it is all at your fingertips. There are several ways to join ASME. Please renew or apply for ASME membership by registering online through [www.asme.org](http://www.asme.org) or downloading and mailing the membership application to ASME. Alternatively, you can call 1-800-843-2763 (US & Canada) or 1-646-616-3100 (Global).

Since 2009 the PVP Division also maintains a networking group on LinkedIn to foster

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## PVPD Membership Report

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interaction and collaboration between PVPD members and interested non-members. Our LinkedIn Group has grown at a spectacular rate since its inception. Membership is currently 27,573 this year compared to 25000 last year. If you have not created a profile on LinkedIn and joined one or more of our groups we encourage you to do so. Simply visit [www.linkedin.com](http://www.linkedin.com) and enter information about yourself as you are prompted by the site. Join this global community of professionals, take part in discussions and connect to colleagues in your field of expertise.

Don't forget about our annual PVP Conference being held this July in Prague, Czech Republic. The ASME PVP 2018 Conference promises to be the outstanding international technical forum for participants to enhance their knowledge-base by being exposed to diverse topics, and exchange opinions and ideas both from industry and academia. PVP is looking forward to fruitful technical exchanges with participants from Europe, Africa, the Middle East, Asia, the Americas, and the Oceania islands. The hotel is currently open to accepting reservations for the conference and we look forward to seeing you at PVP 2018 in Prague.

## PVPD International Coordination



Xian-Kui Zhu

**T**he International Coordination (IC) Committee is one of the ASME PVPD Committees, and plays a bridge role to coordinate between eight PVPD technical committees of C&S,

C&T, D&A, FSI, HPT, M&F, OAC and S&E as well as Executive Committee in providing various assistances between all PVP conference participants and the PVP conference organizers to solve any possible problems or difficulties occurred during each PVP conference every year. The purpose is to help and assist mechanical

engineers, scientists, professors, professionals and students around the world to join the PVP family and to facilitate the continued success and growth of the PVP conferences.

ASME PVP conferences provide a great opportunity for all of us to meet old friends and to make new friends annually so that we can face to face exchange new, innovative, emerging or improved technologies on pressure vessels, piping, pipelines and other pressurized structures. The IC members are among those people around the world. Currently, IC has 10 members to represent the eight technical committees of PVPD. Those IC members come from eight countries (Canada, China, Czech, France, Germany, Japan, UK and USA), and thus are internationals. In the afternoon of Monday on July 17, 2017, the IC Committee met in Waikoloa, Hawaii, USA at the PVP 2017 Conference. During the two-hour meeting, the IC members discussed a variety of topics and issues, including PVPD membership, student and young engineer participation, visa issue, language issues in writing PVP conference papers, paper technical review, future PVP conference location, and possible support suggestions. Those discussions and suggestions have been reported to the PVPD Executive Committee for their information and consideration in planning future PVP conferences.

Bing Li

The PVP 2017 held in Waikoloa, Hawaii, USA was another very successful conference. As of the morning of Monday on July 17, 2017, a total of 842 participants from 42 countries were registered and attended to the PVP2017 conference. This participant number was slightly lower than 1016 of PVP2016 held in Vancouver, Canada, but much higher than 791 of PVP2015 held in Boston, USA. Statistics data for PVP2017 showed that (1) top five countries of the PVP 2017 attendees were US, Japan, China, Canada, and South Korea in 77.4% of the total participants, (2) North America (USA and Canada) had 42.4% of the total participants, (3) three Asian countries (Japan, China and South Korea) had 35.2% of the total participants, and (4) six major European countries (UK, France, Germany, Italy, Netherlands, and Belgium) had participants of 12.7%. As a result, PVPD may need to take some steps to promote more European engineers to participate the an-

nual ASME PVP conference, and the future PVP conference may go to an Asian country, such as Japan, China or South Korea to attract more participants there and to promote ASME PVP business in those countries.

This year, PVP2018 will be held again in Prague, Czech because PVP2009 was held there. It is anticipated that more European participants, including Asian participants, will attend the PVP2018 conference. We are looking forward to seeing you there.

For more information please contact Xian-Kui Zhu at [xzhu@ewi.org](mailto:xzhu@ewi.org)

Xian-Kui Zhu

*Chair, PVPD International Coordination*

## Technical Committee: Computer Technology & Bolted Joints



Jerry Waterland

**T**he Computer Technology Committee and Bolted Joints (CTBJ) Technical Committee is the home for expertise and advancement of computer technology and bolted flanged connection technology within

the PVPD. The Committee combines expertise on software, hardware, algorithms and emerging computer related developments that affect pressure vessel and piping analysis, and on design and engineering process capabilities with a special focus on the performance, capabilities and assembly of bolted joints.

The 2017 PVP Conference was held in Waikoloa, Hawaii. The CTBJ committee organized a total of 12 technical paper sessions delivering 50 technical paper presentations. Topics in bolted joints area included Design & Analysis of Bolted Flange Joints, Elevated Temperature Behavior, Leak Tightness & Fugitive Emissions, Packings & Valves, Threaded Fasteners, Assembly of Bolted Joints and a session focused on Bolted Joint Assembler Qualification—site program implementation experience. Committee members also organized a panel in the bolted joints international liaison

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## Computer Technology & Bolted Joints

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session. In addition, papers were presented with topics in New and Emerging Computational Methods and 3D Crack Growth simulations using FEA. The 26th software demonstration forum was again a success, organized as always by our committee member and PVPD senator Jim Cory. The committee wishes to thank the Technical Program Representative Robert Noble for his efforts in the successful CTBJ technical program at the conference. Thanks are also due to co-TPR Bijan Azadi-Borujeni and to all topic and session developers, whose efforts are much appreciated.

Committee officers for 2018 are Jerry Waterland, Chair; Reza Adibit-Asl, Vice Chair & Secretary; Xinjian Duan, Professional Development Chair; Anita Bausman, Communication Chair, and Young Ho Park, Honors Chair, and Yasumasa Shoji taking care of the Student Paper Competition.

The 2018 PVP Conference is being held in Prague, Czech Republic and planning is well under way for what is looming to be a very productive conference. The CTBJ Technical Committee is scheduling eleven topic sessions with thirty two technical papers and presentations. Eight sessions are focused on Bolted Joints and three are focused on Computer Technology. In addition to the perennial Bolted Joint session topics, there is a new session this year focused on Special Applications of Bolted Joints. Due to increased interest and activity in the Fastening & Joining sessions, there will be three sessions focused on this topic. Technical Program Representative Bijan Azadi-Borujeni is coordinating the development of this year's CTBJ sessions.

Another perennial favorite, the CTBJ Software Demonstration Forum will be held for the twenty-seventh time, providing PVP engineers the opportunity to interact with providers of state-of-the-art design, modeling, and engineering analysis software.

CTBJ will be honoring a long term contributing member of our Committee, Mr. Robert Noble who passed away suddenly earlier this year. Robert was active in the Bolted Joint Assembly sessions, and so it is fitting that we start the 2018 Conference with session CT-4-1 Assembly of Bolted Joints which will be a Memorial session for Robert.

The CTBJ Technical Committee encourages anyone who is interested in promoting the application and understanding of computational methods and bolted joint technology to participate at the committee meeting at the 2018 PVP. Participation can include developing technical and/or chairing technical sessions and contributing papers. Please contact the CTBJ Chair Jerry Waterland at (804) 541-0812 or [jerry.waterland@vspstechnologies.com](mailto:jerry.waterland@vspstechnologies.com) for more information about our Technical Committee and future meetings.

*Jerry Waterland*

*Chair, Computer Technology & Bolted Joints*

## Technical Committee: Materials & Fabrication



*Michiel Brongers*

**T**he Materials and Fabrication (M&F) Technical Committee is one of the larger groups within PVP, promoting research, development, and sharing of technical information related to the development and modeling, as well as fabrication and structural integrity technologies, for piping, pipelines, components and pressure vessels. Our members span the global industry, from practical applied engineering to fundamental research.

M&F covers a multitude of topics and is always interested in the cutting edge and new technologies. Areas of interest include the application of fracture mechanics in failure assessment, materials for hydrogen service, welding residual stress and distortion simulation and measurement, Europe-

an and Asian programs in structural integrity, fitness-for-service and failure assessment, materials and technologies for nuclear power plants, Code fatigue criteria and environmental effects, development of stress intensity factor solutions, mechanistic modeling of deformation and fracture, integrity issues in stress corrosion cracking (SCC) and corrosion-fatigue, pipeline integrity, small-scale testing and statistical analysis of mechanical properties, leak before break analysis, composite systems for pressure vessels and piping, plastic and composite pipe, probabilistic assessment of failure, fatigue and fracture of welds and heat affected zones (HAZs), creep and creep-fatigue interaction, uncertainty quantification of material degradation and failure models, advanced manufacturing and materials technology, emerging manufacturing and mitigation process simulations, additive manufacturing, brittle fracture, multiple flaw interaction, in-service inspection and non-destructive examination (NDE), 3-dimensional crack growth simulation, structural integrity for spent fuel canisters, materials for oil and gas applications.

Because of the multi-disciplinary nature of the technical topics, M&F partners with many of the other technical committees. Collaborations are active with Codes and Standards (C&S) to support development of international Codes and Standards, with Design and Analysis (D&A) in areas of materials deformation and fracture modeling, with High Pressure Technology (HPT) in areas where material properties and fabrication practices are critical, and with the Non-Destructive Engineering (NDE) Division for the product demonstration forum and exhibition.

At the 2017 PVP conference, the Materials and Fabrication Technical Committee (TPR: Dr. Xian-Kui Zhu), M&F organized 23 topics with 46 paper sessions. A total of 167 presentations were made, of which 159 written papers were published in a single conference proceedings volume. There were 18 technical "presentations on-

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## Materials & Fabrication

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ly" (approximately 25% of the total presentations at PVP 2017).

For the 2018 PVP Conference to be held on July 15-20, 2017 at the Hilton Hotel in Prague, Czech Republic, the M&F Technical Program is led by the M&F TPR, Dr. Haiyang Qian. More than 30 topics and 190 papers are planned for the 2018 PVP Conference, including two student sessions to support the PVPD Senate Student Paper Symposium and Competition.

The M&F Technical Committee has grown steadily through the years, and is committed to stay current with the latest technologies. We are proud to have a large international membership, which is open to all individuals over a wide variety of disciplines, and to those who are interested in fostering research and development in pressure vessel and piping materials and technologies.

For more information please contact me at Michiel.Brongers@dnvgl.com.

*Michiel Brongers  
Chair, Materials & Fabrication*

## Technical Committee: Operations, Applications & Components



*Georges Bezdikian*

**T**he past PVP Conference held in July 2017 in Waikoloa Hawaii USA, was a great Conference, which was completely attributed to the efforts performed by our authors, papers reviewers,

Topics organizers, Sessions Developers and Technical Program Representative (TPR) for the 2017 Conference for Operation, Application and Components (OAC) Technical Committee.

For 2018 PVP Conference, to be held in Prague Czech Republic, the TPR and co-TPR assisted by all session developers performed several actions to collect 58 papers, less than last PVP with 70 papers due to the success of Hawaii location. For 2018 PVP Conference, OAC sub-committee is orga-

nized in 10 sub-committees and 14 sessions.

The architecture of OAC-1 Safety, Reliability and Risk Management is divided in two sub-sessions. Sub-session 1 Optimizing Operations via Risk Management with 4 papers and sub-session two Predicting the Future: Risk Assessment and Management.

In the session 1 two topics are presented: Value-Based Bayesian Optimization of a Preventive Maintenance Program proposed by EPRI on Preventive Maintenance Basis Database (PMBD) for Industry and Nuclear Energy, and Financial Optimization of a Preventive Replacement Strategy for Individual Components. The status of Two other papers is only under abstract situation.

The session 2 includes five papers from China dedicated on the Petroleum and chemical industries. For example: the Effect of Nozzle Geometry on the Near-field Flow Characteristics of High-Pressure Gas Leak Jets and Fire Accident Inversion Method base on STAMP and Topological Network for LNG Depot

Only one session is scheduled for OAC-2 Qualification and Testing, with only two papers. The author of one paper decided to withdraw his paper and one paper "Pneumatic Test of Pressurized Equipment: Its Hazards and Alternatives" was moved to OAC 8-2 session.

OAC 3 Monitoring, Diagnostics & Inspection contains 9 papers in two sessions: one session with 4 papers oriented on petroleum and off-shore industrial equipment and on nuclear pressure equipment heat exchanger. The second session with 5 papers contains for example topics on; High Temperature Semiconductor Strain Gages for Thermal Power Plant Applications, Magnetic Distribution of Nd-Fe-B Permanent Magnets in Pipeline In Line Inspection Tool, and papers on inspections, sensors for non intrusive pressure measurement, Creep Degradation On Collapsed Membrane Wall From P265GH Pressure Purpose Steel By Ultrasonic Testing.

OAC 4 Storage and Transportation of Radioactive Materials sub-committee is organized in two sessions with 9 papers. One session contains papers on dangerous, radioactive or high pressure containments, packaging and transportation for example

Temperature Prediction of a TN-32 Used Nuclear Fuel Canister Subjected to Vacuum Drying Conditions. The second session nuclear spend fuel containment, Ageing, Elevated temperature, Materials, Polymers,

OAC 5 Pumps and Valves contains two sessions and 6 papers. Topics proposed are dedicated on; Prediction erosion damage in a choke valve under severe conditions, Qualification of Valve Actuators for Safety Related Nuclear Applications: Lessons Learned, A Case Study: Balanced Globe Valves Failure, Root Cause, and Recovery

The architecture of OAC 6 Operations & Maintenance of Pressure Vessels, Heat Exchangers, Piping and Structures is organized in two sessions containing 8 papers in total. One session focused on reliability and optimization, vibration in piping systems and Algorithm Based on Selective Optimization of Pipeline Elevation and the second session focused on Fitness for service and continued safe operation

OAC 7 Hazardous Materials Storage Handling and Transportation sub-committee collected only one abstract from China the draft paper was not introduced in the PVP website a next contact with TPR and session developer will decide to maintain or not this paper.

OAC 8 Plant Life Extensions: Aging & Life Management contains 7 papers in two sessions.

Session one: subjects treated are BWR nuclear Plants (two papers from Finland) and also American and French Integrated Nuclear Life Cycle Management computer code to be used on USA and France Nuclear Plants, and Buried piping in Palo Verde Nuclear Generating Station.

Second session contains papers on Industrial facilities example SEVESO installation, inspection tests qualifications and different qualifications processes for Nuclear and Industry.

OAC 9 and 10 Student Paper Competition selected one paper PhD; titled Comparison of DSMC and CFD models of Heat Transfer in a Rarefied Two-dimensional Geometry

Papers collected for 2018 PVP Conferences are from USA, Canada, Germany, China, Italy, United Kingdom, Czech Republic, France, Finland.

*Georges Bezdikian  
Chair: Operations, Applications & Components*



## Technical Committee: Codes & Standards



*Russell C. Cipolla*

**T**he Codes and Standards (C&S) Committee promotes the development and exchange of technical information on current industry and research topics related to the C&S for pressure vessels and piping components. There are a multitude of industry consensus codes, standards, rules, and guidelines on the design, construction and fitness-for-service in the world. Such International industry codes include ASME B&PV Code, API 579/ASME-FFS, European FITNET, French Codes RCC-M and RSE-M, German Guideline FKM, British Standard BS 7910, R-6 and R-5, Chinese Code GB/T, Czech Code AME Standard, Japanese Code JSME, etc. Although the evaluation methodologies may differ, there is a need to harmonize them to obtain consistent results among these different codes and to understand the many unique differences. To this end, the C&S Committee has supported and offered opportunities to share information of mutual interests over the years. This has been facilitated by discussion of ideas and practices among the various international codes through cooperative technical sessions at ASME PVP conferences.

The C&S main topics of interest are in the areas of design and construction criteria, integrity assessment methods, repair and mitigation technologies, in-service inspections and non-destructive examinations, flaw evaluations, high temperature codes, and new criteria for code improvement. The papers in C&S contain technical documents that describe suggested code changes and even propose new standards. We emphasize new code developments and provide a venue for publishing technical basis papers that discuss the fundamental theory and philosophy behind code evaluation procedures. The C&S Committee has become truly international in nature, bringing together people from different countries to exchange new technologies and to share codes and standards developments from their part of the world.

The 2017 PVP Conference in Waikoloa Village, Hawaii (USA) was very successful.

The C&S Committee sponsored 25 major technical topics. A total of 142 technical papers, 15 presentations only, and 2 panel sessions were presented during 41 sessions at the conference. Some of these sessions were jointly sponsored with other technical committees; 3 with the Materials & Fabrication (M&F) and 12 with Design and Analysis (DA). The C&S Technical Committee sessions included multiple topics on Emerging Codes and Standards, environmental effects on material performance, recent developments in US, Chinese, and European Codes, and High Temperature Codes. Some new technical areas involved Extreme Pressure Equipment, Master Curve Fracture Toughness Methods, and updates on ASME Code Section III activities.

The PVP 2017 C&S Committee meeting was attended by 68 members and visitors. During the meeting, Honors and Awards Chair Trevor Seipp awarded Certificates of Recognition to Ryan Crane and Kiminobu Hojo for their work as the 2017 Technical Program Representative (TPR) and Co-TPR. In addition, Certificates of Recognition were given to Yogen Garud, Phillip Prueter, Seiji Asada, Valéry Lacroix, and John Sharples for their dedicated service to C&S as a session developers. A Certificate of Appreciation for his Long-Term Service to the Division as C&S Topic/Session Developer and past TPR was awarded to Steven Xu. At PVP 2017, Julian Emslie, Chris Gill, and Keith Wright received the Award for the Outstanding Technical Paper for PVP2016 entitled, "Assessment Method to Account for the Rise Time of Complex Waveforms in Stainless Steel Environmental Fatigue Crack Growth Calculations," which was presented at the C&S (CS-3) session on Environmental Fatigue Issues. The C&S Technical Committee has grown steadily through the years, and is proud to have a large international membership and active participation.

This year's conference, PVP2018, will be held in Prague, Czech Republic, July 15 – 19, 2018. Prague has served as our venue for PVP in 2009 and has proved to be a well attended and highly successful conference location. Everyone involved in the planning and administration is working very hard to make the PVP 2018 C&S sessions a very successful endeavor. At the time of this writing, the C&S track has received

approximately 160 technical papers for 33 session topics. The C&S Committee sessions for this year's conference are being jointly organized and led by the 2018 TPRs, Ryan Crane from USA and Kiminobu Hojo from Japan. The coordinator for the student paper competition for C&S is Peter James from the UK. Continuing topics in the C&S Track are related to International Codes (Europe, China, Japan and the US), environmental effects on fatigue, and integrity of pressure components and piping, fracture mechanics developments, and ASME Section XI Code activities. New areas to be covered in C&S topics include Small Modular Reactors; Repair, Replacement, and Mitigation for Fitness for Service; Aging Management; Developments in HDPE and Non-metallic Pipe Codes and Standards; and Interaction and Modeling for Multiple Flaws.

We have great expectations that PVP2018 in Prague will be a very successful conference. The C&S Technical Committee has maintained a very active membership which has steadily grown over the recent years. Anyone interested in Codes and Standards activities are welcome to attend the next C&S technical committee meeting at PVP2018 Conference in Prague. The Committee is seeking individuals who are interested in serving as session developers and symposium organizers. For more information on C&S activities, please feel free to contact Mr. Russell Cipolla at [rus-sell.cipolla@intertek.com](mailto:rus-sell.cipolla@intertek.com).

*Russell Cipolla  
Chair, Codes and Standards*

## Technical Committee: Design & Analysis



*Ravi Baliga*

**S**everal individuals from Academic Institutions abroad have shown interest in joining the membership roster of Design and Analysis Committee of ASME PVP Division.

The membership has exceeded the last year's number, 40. The D&A members are affiliated to Academic Institutions, Private Industries, and Government Entities providing a required technical depth in solving practical problems in the mechan-

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## Design & Analysis

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cal engineering field associated with pressure vessels and piping.

The 2018 PVP Conference will be held in Prague, Czech Republic from July 15 till July 19, 2018. For the conference in Prague, the D&A Committee is currently working on developing approximately 20 technical sessions with more than 190 technical papers. For D&A Committee the 2017 ASME PVP Conference in Hawaii was a great success in presenting approximately 165 technical papers out of which three papers were selected for best paper awards to be presented in 2018 Conference in Prague. Committee members will meet on the second day of the conference to discuss the committee mission and goal and identify the lessons learned during developing sessions and interacting with the authors of the technical papers. During the meeting the PVP Conference Executive Committee will present the awards to the authors of the best papers presented in 2017 in Hawaii.

In the meeting in Prague goal will be set to develop number of technical sessions for the 2019 Conference in San Antonio, Texas.

*Ravi Baliga*

*D&A Technical Committee Chair*

## Technical Committee: High Pressure Technology



*Karl C. Simpson*

**T**he High-Pressure Technology (HPT) Committee focuses on design, research, development and operation of high-pressure equipment and systems. The attendees experience is our key focus in planning and the execution of our technical track at PVP Conferences. It provides important feedback for the continuing development of ASME high-pressure codes and standards. HPT sessions provide a good mix of corporate researchers and members of academia, exploring fundamental technology, disseminating cutting-edge aspects of high-pressure tech-

nology and presentations of the knowledge gained from high-pressure applications.

The High-Pressure Technology Committee held its 2017 annual meeting during the PVP Conference in Waikoloa, Hawaii. The HPT Committee is an international committee with representatives from ten countries and four continents. For the PVP 2017 Conference, the Committee organized technical & panel sessions that covered various aspects of high-pressure technology. During the conference, a panel session titled "Panel Session on Sec VIII, Div 3 History" was well attended with significant participation of attendees in the discussions. Special thanks go out to all the authors who wrote and presented papers at the conference. I would also like to take the opportunity to thank all the Session Developers, paper reviewers and Technical Program Representative Kannan Subramanian and his co-TPR Kumarswamy Karpanan for the many hours they dedicated to making the HPT sessions a great success.

The 2018 PVP Conference will be held in Prague, Czech Republic July 15th through the 20th. There are four HPT technical topics currently being finalized under the direction of our Technical Program Representative Chris Tipple and his co-TPR Kannan Subramanian. These are: Design, Analysis, and Life Prediction of High Pressure Vessels and Equipment (organized by Kannan Subramanian and Kumarswamy Karpanan), Structures under Extreme Loading Conditions (organized by David Gross, Matthew Edel and Victor Janzen), Design and Analysis of High-Pressure Equipment for Industry (organized by Kumarswamy Karpanan and Daniel Peters), Design and Analysis of High-Pressure Equipment for the Oil and Gas Exploration and Production (organized by Kumarswamy Karpanan and Daniel Peters) and the Student Paper Competition (organized by Mahesh Aggarwal).

Anyone who is interested in high-pressure technology is invited to join us in Prague for the conference and to participate at the annual HPT Committee meeting which will be held during the conference.

*Karl C. Simpson*

*Chair, High-Pressure Technology Committee*

## Technical Committee: Seismic Engineering



*Fabrizio Paolacci*

**P**ast seismic events have tragically

demonstrated the high vulnerability of civil and Industrial structures in earthquake prone areas. This is the main reason of the con-

tinuous research activity devoted to new and effective design/assessment methods. However, while the experience in civil construction has seen decades of growing, the activity related to industrial installations started its development only few years ago. In this respect, Seismic Engineering Technical Committee (SETC) encourages and promotes the expansion of knowledge in a broad range of seismic-related topics. Important topics of interest include the fundamental and engineering aspects of Seismic resistance and margin, Seismic isolation, Damping and Energy dissipation, Structural dynamics and Control, Damage assessment, Multi-hazard and Risk evaluation, Seismic qualification of structures and components, Testing and analysis verification, National or International programs on seismic and lifeline engineering, Advanced seismic evaluation and Codes.

For the 2017 ASME PV&P Conference, a total of 56 papers have been published in Seismic Engineering. These papers represent the direct result of continuing interest and cooperation in earthquake engineering by authors from America, Asia and Europe. The papers denote well the ongoing work in a variety of seismic-related fields and demonstrate the broad range of challenges that are addressed by seismic engineers. The collected papers were grouped by the relatively broad areas of interest in seismic engineering (Earthquake Resistance and Seismic Margin, Seismic Isolation, Damping and Vibration Control, Structural Dynamics, Seismic Damage Assessment and Health Monitoring, Seismic Analysis and Design of Piping System, Seismic Evaluation of Systems, Structures and Components, Multi-Hazards and Margins. In addition, a special attention has been paid to the collaboration with other Technical Committees because is our con-

## Seismic Engineering.

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viction that the multidisciplinary character of a TC is the basis for a real advancement. In this respect the joint session "Advanced Seismic Evaluation and Code" (Joint session with C&S) has been promoted.

The SETC met on Tuesday, July 21, 2017 at Hilton Waikoloa Village, Hawaii, USA, Room: Kona3, 12:15 pm – 1:45 pm, with twenty attendees including four guests. All guests (including three young engineers) expressed their wish to participate in the next PVP conferences, and perhaps, be members of the SETC. During the meeting, two new members were elected, namely, Kyoshi Aida and Antonio Casimiro Caputo that were warmly welcome. The meeting has been characterized by the handover between prof. Fabrizio Paolacci and Prof. Tomoyo Taniguchi as chair of SETC. The important contribution of Pr. Taniguchi as previous chair in increasing and improving the promotion of the research activity within SETC has been strongly emphasized.

For the PVP 2018 Conference to be held in Prague, Czech Republic, the SETC will develop thirteen paper sessions for thirteen topics, including the Rudy Scavuzzo Student Paper Competition Sessions and a Joint Session with C&S TC.

Given the recent increasing interests of the research community in rather new topics, related to industrial installations, like resilience to Natural-Technological events (Na-Tech) events, two new activities have been promoted by SETC: a) Special topic for the Journal of Pressure Vessel Technology titled: Na-tech risk assessment methodologies and mitigation solutions in the process industries, Guest Editors: Fabrizio Paolacci, Oreste S. Bursi and Tomoyo Taniguchi, b) 1st International Workshop on Risk and Resilience of Industrial installations against natural threats and mitigation strategies, developed within the European Project XP-Resilience (<http://r.unitn.it/en/dicam/xp-resilience>) in collaboration with ASME PVPD. The main objective of this workshop is to familiarize Early Stage and Experienced Researchers with the state-of-the-art of risk and resilience of industrial installations. Worldwide recognized experts will provide a clear overview on this topic.

The international character of the SETC offers the opportunity to meet and interact with engineers and researchers from around the world who are working in the

various topics associated with seismic engineering. I encourage all who may be interested in seismic engineering issues and desire more information on the activities of the PVPD SETC to contact me via e-mail at [fabrizio.paolacci@uniroma3.it](mailto:fabrizio.paolacci@uniroma3.it).

*Fabrizio Paolacci*  
Chair, Seismic Engineering

## Technical Committee: Fluid Structure Interaction



*Tomoyo Taniguchi*

The Fluid-Structure Interaction (FSI) Technical Committee promotes the study and application of the dynamics of fluid structure interaction as they relate to the design and operation of pressure vessels, piping systems and components. Emphasis is placed on the fundamental and engineering aspects of flow induced vibration, fluid-solid interactions, shock and wave propagation, fluid dynamics and transient thermal hydraulics, multiphysics, as well as fluid-structure dynamical systems and their response. The Technical Committee organizes sessions on these topics at conferences and symposia, encourages and supports publication in the area of FSI and promotes the recognition of outstanding engineering achievements and significant individual contributions to pressure vessels and piping technology.

At the PVP-2017 conference in Waikoloa, Hawaii, the FSI TC Technical Program Representative (TPR) Lambros Kaitsis and Victor Janzen alongside with the topic/session organizers, developed 19 sessions with more than 85 papers. The forthcoming PVP-2018 conference, which will be held in Prague, Czech Republic, promises to be a very interesting technical and social event. The FSI TC is sponsoring more than 45 papers distributed over 10 sessions. A student paper competition will also take place. This impressive level of participation is due to the hard work and dedication of the all the members of the Committee including the 2018 FSI TC TPR Victor Janzen and Daniel Broc and the topic/session organizers. In my capacity as the new FSI Tech-

nical Committee Chair, I thank them all for their effort in organizing such a promising event. I also take this opportunity to strongly encourage all individuals of the FSI community to attend the PVP 2018 Conference.

The FSI technical committee has been growing continuously over the years and its current membership is truly international. The committee welcomes new members who are interested in promoting research and development in the area of FSI in general and its application to the pressure vessel and piping technology in particular. Those who would like to join the FSI Committee as official members are encouraged to send a copy of their resume to the FSI Chair. In addition, anyone interested in the Committee's activities is invited to attend the FSI Committee meeting at the PVP-2018, or contact the committee Chair. The time and location of the meeting will be listed in the conference program.

*Tomoyo Taniguchi*  
Chair, Fluid-Structure Interaction

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# ***PVP2019 – San Antonio, Texas***

***Hyatt Regency San Antonio Riverwalk***

***July 14–19, 2019***

## **2019 ASME Pressure Vessels & Piping Conference**

### ***Futuristic Technology Trends in Pressure Vessels and Piping***

**PVP2019** Join us in the beautiful city of San Antonio, Texas, for the 2019 ASME Pressure Vessels & Piping Conference. PVP2019 brings future technologies to the Pressure Vessels and Piping Industry. More than 180 paper and panel sessions are planned, as well as tutorials and workshops, a Technology Demonstration Forum, and the 27<sup>th</sup> Rudy Scavuzzo Student Paper Symposium and Competition. The PVP Conference is an ideal platform for keeping up with new technologies, networking and meeting world leading experts and practitioners in the Pressure Vessels and Piping area. The PVP Conference is a recognized international forum with participants from over 40 countries in Europe, Africa, the Middle East, Asia, the Americas, and the Oceania islands. The ASME Pressure Vessels & Piping Division will sponsor the PVP2019 Conference with participation by the ASME NDPD Division.

**GENERAL TOPICS:** (1) Codes & Standards; (2) Computer Technology & Bolted Joints; (3) Design & Analysis; (4) Fluid-Structure Interaction; (5) High Pressure Technology; (6) Materials & Fabrication; (7) Operations, Applications & Components; (8) Seismic Engineering; (9) Non-Destructive Examination; and (10) 27<sup>th</sup> Rudy Scavuzzo Student Paper Symposium and Competition. Technical areas will include developments in Codes and Standards, design methodologies including elastic-plastic analysis, non-destructive examination, fitness-for-service, operation and maintenance, creep, fatigue, stress corrosion cracking, residual stresses, fracture toughness, elevated temperature components, non-metallic components, dynamically-loaded structures, flow-induced vibration and risk-based assessments.

**SCHEDULE:** Abstracts are due by **November 5, 2018**. Authors will be notified of abstract acceptance by **November 26, 2018**. Draft papers are due by **February 4, 2019**. Paper peer review comments will be returned by **March 4, 2019**. A Copyright Agreement Form for each paper must be submitted by **April 1, 2019**. The final manuscripts in the standard ASME format for publication must be received by **April 8, 2019**. All presented technical papers will be published as citable documents available post-conference.

**INFORMATION:** The conference website URL is: <http://www.asmeconferences.org/PVP2019/>. Technical paper abstracts must be submitted electronically through the website. Please visit the website for additional information.

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