

# 2016 Keynote Speaker .....



## Dr. Rose Ryntz

Vice-President, Advanced Engineering & Material Development  
International Automotive Components (IAC) Group

### The Changing Landscape for Plastics Use in Interior Automotive Applications

Dr. Rose Ryntz, vice-president, Advanced Development & Material Engineering, International Automotive Components (IAC) Group (Southfield, Mich., U.S.A.) will give a keynote talk entitled *The Changing Landscape for Plastics Use in Interior Automotive Applications* on Tuesday, March 22, 2016 at 8:45 a.m. As background on her topic, she explains that plastics use in automotive applications is expected to represent approximately 18% of total vehicle weight by 2020 and contribute roughly \$110-billion USD to global plastics sales. During that same time period, global sales of automotive interior components (in all materials) is expected to reach \$325-billion USD, offering suppliers “great incentives to participate.” However, the functional requirements and usage of plastic materials are changing rapidly due to factors like economics and governmental mandates. With increased demand for lighter, more competitively priced vehicles, and current challenges by vehicle-interior suppliers in meeting growing production demands, it is more important than ever to select plastics and design parts efficiently and correctly if a company wishes to become the supplier of choice for a given automaker.

“My presentation will focus on the changing geographic and demographic landscape for vehicle interiors and the effect of those changes on plastic material selection,” explains Ryntz. “As the interaction between car and driver becomes, paradoxically, more complex, the key to supplier success will be focused product segments and technology differentiation. Lifestyle demands, such as the desire for personalization, use of illuminated surfaces, and the focus on occupant comfort and convenience, as well as acoustic performance, environmental stewardship, and safety all will be discussed in relation to polymer selection. Additionally, the advent of the autonomous car and increased human-machine interactions also will be discussed relative to how they affect both the industry and its requirements.”

Ryntz holds a Ph.D. degree in Polymer / Organic Chemistry from the University of Detroit and an M.B.A. degree from Michigan State University. During her career she has worked at Dow Chemical, DuPont Automotive, Ford Motor Co., Akzo Nobel N.V., and Visteon Corp. before assuming her current role at IAC. She is a sought-after speaker at domestic and international events, is a prolific writer with over 180 publications, 30 patents, and four books, and is a recipient of many prestigious awards. Last year she was named as one of the 100 Leading Women in Automotive, and in 2014 was awarded the SPE Detroit Section’s prestigious Outstanding Member award. Additionally, she has been the recipient of the International Biographical Center *Who’s Who in the World*, has received Best Paper and Best Speaker awards from both the Federation of Societies for Coatings Technology (FSCT) and SPE, the FSCT Women in Coatings’ Management Achievement Award, the George B. Heckel Award and Matiello Award, the American Chemical Society’s (ACS’s) Roy Tess Award, the Women Automotive Association’s International Professional Achievement Award, the Engineering Society of Detroit’s (ESD’s) Outstanding Leadership Award and Gold Award, the University of Southern Mississippi’s Elias Singer Best Paper Award, a Roon Award from FSCT, and the Henry Ford Technology award presented by the Ford Motor Co. for outstanding technical contributions to the company. Ryntz has been very active as a society volunteer. She served as president of FSCT from 2005-2007, and was elected as a Fellow in SPE in 2006. She also has served on the board of directors of the Detroit Section of SPE, and is currently a member of the Engineering Dean’s Advisory Board at the University of Detroit.

# Dr. Rose Ryntz

瑞兹博士是位于美国密西根州的国际汽车部件集团公司的副总裁，主管尖端材料工程的开发。她的主题报告题目是“塑料在汽车内饰应用的演变。”

瑞兹博士预计到2020年塑料在汽车上的应用将会达到百分之十八的汽车重量，导至一千一百亿美元的全球塑料销售量。同时，所有的汽车内部材料的全球销售量将达到三千二百五十亿美。这些增长的数量给部件供应商带来很大的吸引力。但是，由于多种因素，比如经济影响及政府政策规定，塑料材料的功能要求和应用正在快速变化。目前对更轻更经济的汽车的需求量正在不断增长，汽车生产量的上升对汽车内部部件供应商也成为一个问题。面临这些挑战性的问，正确的塑料材料挑选和部件设计来产生更高效率是非常重要的。

瑞兹博士报告着重点是地理和人口统计的演变以及它们对汽车内部塑料材料选择的影响。目前的趋势是驾驶员和汽车的互相合作和影响变得越来越复杂。对部件供应商来说，成功的诀窍就是将注意力集中在部件分类配套和技术优势。她会讨论如下因素：新的生活方式需求，比如个人化，表面照明，司机和乘客的舒服和方便，音响效果，环境影响，以及安全对高分子材料选择的影响。她也会讨论正在发展中的自动驾驶汽车和不断增长的人与机器的互相合作，以及它们对汽车工业和需求的影响。

瑞兹博士是从底特律大学获得高分子/有机化学博士学位的。她还从密西根州立大学得到管理学硕士学位。她曾在下列公司工作过；陶氏化学公司，杜邦汽车，福特，阿克苏诺贝尔和伟世通。瑞兹博士经常被邀请去国内和国际会议做报告。她已发表了180篇论文，有30份专利，还出了4本书，得到过许多有声望的奖章。去年她被命名为汽车工业内前一百名杰出女带头人。在2014年她得到了SPE底特律分会的杰出会员奖。她被选入国际传记中心的世界名人录。瑞兹博士的奖章还包括：FSCT和SPE的最佳论文奖以及最佳演讲奖，FSCT的杰出女士涂层管理成就奖，George B. Heckel奖和Matiello奖，美国化学学会Roy Tess奖，女子汽车协会的国际专业成就奖，底特律工程协会的杰出领导能力奖和全奖，南密西比大学的Elias Singer最佳论文奖，FSCT ROON奖，福特科技奖。瑞兹博士一直在为各种科技协会义务做事。2005-2007年，她曾担任FSCT总裁。在2006年她被选为SPE委员。她还担任SPE底特律分会的理事。她现在还是底特律大学工学院的顾问。

# 2016 Keynote Speaker .....



## Dr. Stéphane Quilliet

Engineering Manager-Injection Molding Team  
RocTool

### On the Road to a New Standard: High-Definition Plastics

Dr. Stéphane Quilliet, engineering manager-injection molding team, RocTool (Le Bourget du Lac, France) will give a keynote talk entitled *On the Road to a New Standard: High-Definition Plastics* on Wednesday, March 23, 2016 at 8:45 a.m. RocTool's technologies for rapid mold heating and cooling provide plastic processors with practical solutions that increase productivity — via faster molding cycles, lower energy usage, better thickness control, and enhanced part complexity — as well as improve post-mold part quality — via optimized surface quality (whether matte or glossy) and invisible weldlines. These features are wanted and needed by molders in all major market segments, but especially in the high-volume, cost-sensitive, aesthetically demanding automotive industry.

"The plastic industry is constantly working to offer better process solutions in order to respond to design challenges from automakers. My presentation will focus on the ongoing evolution of several such process enhancements. I also will share our vision of the next key steps to reach a new quality and performance standard" explains Quilliet. "I will share with the attendees our vision and explain what we believe are the conditions needed to reach a new standard in the industry. In addition, I will discuss the importance of the fact that we now can accurately simulate the inductive heating and cooling technique via AutoDesk, Inc.'s MoldFlow® software, which helps improve the accuracy of moldfilling and warpage analyses as well as shows the benefits of our induction technology during the initial design phase, long before tooling is cut. We think of these as 'high-definition plastics' solutions for OEMs and their manufacturers."

Quilliet has worked at RocTool for almost seven years, the last six of which he spent designing 3itech® technology and conducting moldflow analyses for customers. Before joining RocTool, he spent a decade working for several service companies, including five years at MAPEA, which he founded and where he worked as a development engineer. These companies were involved with a variety of plastics processes, including injection molding, extrusion, and compounding, and gave him experience in simulation, materials science, and training — all of which provided broad knowledge in the field of plastics processing. Quilliet holds a Ph.D. degree in Dynamique des transferts (Transfer Dynamics) from Université de Nantes, where his thesis topic was on modeling the heat-transfer conductance between part and tool during injection molding. He also earned a Diplôme d'ingénieur, Thermique - Energétique (Engineering Diploma - Thermal Energy) degree from Polytech 'Nantes.

# Dr. Stéphane Quilliet .....

桂莱特博士是法国ROCTOOL公司注射型部门的工程经理。他的主题报告题目是"走向新的标准：高保真度塑料。"

ROCTOOL公司的快速模具加热和冷却技术使得那些做塑料加工成型的能很实际的解决提高生产力问题-通过更短的成型周期，低能源消耗，更好的厚度控制，和能做更复杂的部件-同时也提高已成型部件的质量-通过最佳化的表面质量（不管是无光泽或光面）以及看不见的接缝。以上那些特色能满足加工成型的需求在所有的市场，但特别是对高产量，成本敏感，审美要求高的汽车工业。

塑料工业总是想找到更好的工艺过程去满足汽车制造业的设计挑战。桂莱特博士的报告的重点将是目前正在进化的几种工艺改革和优化。他会提到所需要的关键步骤去达到新的质量和性能的标准。他会解释他相信所要具备的条件去达到这个新的工业标准。以外，桂莱特博士还会讨论能够精确模拟感应加热和冷却技术的重要性。这种模拟是用Autodesk的MoldFlow软件，它能帮助提高成型度和变型分析精确度。同时它能显示感应加热技术的好处远在很贵的模具制造之前。他认为这些就是"高保真度塑料"能解决很多汽车制造工业的问题。

桂莱特博士在ROCTOOL工作了将近七年。在过去的六年里他设计了3itech技术为用户做模流量分析。在ROCTOOL之前，他在几个服务公司做了十年，包括五年在MAPEA公司他帮助建立起来。在那里他做过开发工程师。那些公司做了许多塑料工艺流程。包括注射成型，挤压成型和塑料改性。这给了他很多在模拟，材料科学，培养和训练的经验所有这些给了他很广的知识在塑料工艺领域。他的转换动力学博士学位是从Nantes大学获得的。他的博士论文的课题是模拟注射成型时部件和模具之间的热传导和转换。他还从Nantes科技学院得到过热能学士学位。