

第三届 AIAED 大会  
AI+智适应教育峰会议程  
World AI & Adaptive Education Conference

主办：松鼠 AI 智适应教育、IEEE 教育工程和自适应教育标准工作组、中国自动化学会、新东方、好未来、36 氪

时间：2019 年 5 月 24-25 日，地点：北京国贸大酒店，主会场三层，技术分会场 B1 层

主持人：义学教育松鼠 AI 合伙人 Joleen Liang

福布斯 AI 杂志出版人 Will Thompson

**主会场：**

**5 月 24 日 第一天会议**

- 9:30-10:00 第三届 AIAED 主席、CMU 计算机学院院长 Tom Mitchell 教授演讲并开场
- 10:00-10:15 卡耐基梅隆大学与义学教育松鼠 AI 联合实验室签约仪式、及 Ken Koedinger 教授聘书颁发仪式
- 10:15-10:35 义学教育-松鼠 AI 创始人 Derek 栗浩洋演讲
- 10:35-11:05 好未来集团 CTO 黄琰演讲
- 11:05-11:30 伦敦大学教授，伦敦知识实验室负责人，国际顶尖 AI 教育学术大会 AIED 主席 Rose Luckin 教授演讲
- 11:30-12:00 Panel 论坛 1、智慧教育论坛
- 主持：鲸媒体 CEO 迟耀明
- 嘉宾 1：北师大智慧学习研究院院长、互联网教育智能技术国家实验室主任黄荣怀教授
- 嘉宾 2：The New School 副总裁首席信息官、前 IBM Watson AI 教育事业部总经理 Lin Zhou
- 嘉宾 3：VipKid 大数据与 AI 中心 副总裁 周洋

12:00-13:30 休息

- 13:30-14:00 AAAI 主席 Yolanda Gil 教授演讲
- 14:00-14:10 百万美金科学大奖项目对话及宣布
- 主持：福布斯 AI 杂志出版人 Will Thompson
- 对话嘉宾：AAAI 主席 Yolanda Gil 教授
- 对话嘉宾：义学教育-松鼠 AI 创始人 Derek 栗浩洋
- 14:10-14:40 ASU-GSV 教育大会联合创始人、GSV 资本创始人 Michael Moe 演讲
- 14:40-15:00 iTutorGroup 创始人杨正大 Eric Yang 演讲
- 15:00-15:20 立思辰人工智能实验室主任 张文铸博士演讲
- 15:20-15:45 论坛 2、AI 教育技术论坛
- 主持人：英国教育作家、《自然出生的学习者》作者 Alex Beard
- 嘉宾 1：斯坦福研究院国际中心主任 Marie Bienkowski 博士
- 嘉宾 2：CMU 计算机及心理学系教授 Ken Koedinger 教授演讲
- 嘉宾 3：麦肯锡学院首席数据科学家 Ani Aghababayan 博士
- 嘉宾 4：义学教育-松鼠 AI 首席科学家崔炜博士
- 15:45-16:00 创世伙伴资本主管合伙人周炜演讲
- 16:00-16:20 葡萄智学创始人茹立云演讲
- 16:20-16:50 Panel 论坛 3、全球 AI 教育公司论坛
- 主持：亿欧网创始人黄渊普
- 嘉宾 1：海外 AI 教育公司 Carnegie Learning 联合创始人 Steve Ritter

- 嘉宾 2: 海外 AI 教育公司 Kidadaptive 科学家 Josine Verhagen  
嘉宾 3: 海外 AI 教育公司 Age of Learning 首席战略官 Sunil Gunderia
- 16:50-17:05 AI 智适应教育报告发布: 德勤发布, 德勤中国教育行业领导合伙人卢莹 Charlotte Lu
- 17:05-17:30 第一天压轴演讲: 英国教育作家、《自然出生的学习者》作者 Alex Beard
- 17:30 第一天会议结束

#### 5 月 25 日 第二天会议

- 9:30-10:00 CMU 计算机及心理学系教授、领导开发 Cognitive Tutor 软件, Ken Koedinger 教授演讲
- 10:00-10:30 Rewiring Education 学习升级新书发布, 苹果公司副总裁 John Couch、松鼠 AI 创始人 Derek 栗浩洋、湛庐文化 CEO 陈晓晖
- 10:30-10:50 Youth Education Speech 青少年教育演讲: MIT 媒体艺术与科学副教授、MIT Media Lab 机器人小组负责人 Cynthia Breazeal 演讲
- 10:50-11:10 The New School 副总裁及首席信息官、前 IBM Watson AI 教育事业部总经理 Lin Zhou 演讲
- 11:10-11:30 加拿大多伦多大学应用心理学和人类发展系教授 Kang Lee 演讲
- 11:30-11:50 CMU 计算机科学及认知神经基础中心演讲教授, AI4K12 项目联合主席 Dave Touretzky 演讲
- 12:00-13:30 休息
- 13:30-14:00 MIT 人工智能实验室主任 Daniela Rus 教授演讲
- 14:00-14:20 掌门一对一创始人张翼 Yi Zhang 演讲
- 14:20-14:30 榜单发布 Award for AI Education
- 14:30-15:10 Youth TED Talk 青少年 TED 演讲  
TED 演讲 1: 吕昭成, 17 岁  
TED 演讲 2: 栗浦洲、张洪源, 8 岁  
TED 演讲 3: 崔艺嘉, 14 岁  
TED 演讲 4: 陈关阳, 14 岁  
TED 演讲 5: 张子行, 12 岁
- 15:10-15:20 AIAED 颁发最佳论文: 孟菲斯大学教授、华中师范大学心理学院院长胡祥恩教授主持  
由大会主席 Tom Mitchell 教授和 Local Chair 松鼠 AI 首席科学家崔炜博士颁发
- 15:20-15:30 最佳论文演讲 1
- 15:30-15:40 最佳论文演讲 2
- 15:40-16:00 斯坦福教育学院副院长 Paul Kim
- 16:00-16:30 大会压轴论坛 4: 孩子教育的未来  
主持: FT 金融时报中文网总裁张延  
嘉宾 1: 伦敦大学教授, 伦敦知识实验室负责人、AIED 主席 Rose Luckin 教授  
嘉宾 2: 第三届 AIAED 主席、CMU 计算机学院院长 Tom Mitchell 教授  
嘉宾 3: 孟菲斯大学教授、华中师范大学心理学院院长胡祥恩教授  
嘉宾 4: 义学教育-松鼠 AI CEO 周伟

16:30

大会结束

### The Main Stage (3<sup>rd</sup> floor)

#### May 24<sup>th</sup> Day 1

9:30-10:00 Opening Keynote: Tom Mitchell, AIAED General Chair & Dean of School of Computer Science, Carnegie Mellon University

10:00-10:15 Signing Ceremony of Carnegie Mellon University and the Squirrel AI Learning Joint Laboratory and Professor Ken Koedinger's letter of appointment ceremony

10:15-10:35 Keynote: Derek Li, founder, Squirrel AI learning by Yixue Group

10:35-11:05 Keynote: Yan Huang, CTO, TAL Education Group

11:05-11:30 Keynote: Dr. Rose Luckin, AIED Chair, Prof. of Learner Centred Design, the UCL Knowledge Lab, AIAED Advisory Committee Member

11:30-12:00 Panel 1: Intelligent Education

Moderator: Yao Ming Chi, CEO, Jing Media

Panelist 1: Prof. Ronghuai Huang, Dean of School of Smart Learning Institute of Beijing Normal University, Head of National Engineering Laboratory for Cyberlearning and Intelligent Technology.

Panelist 2: Lin Zhou, S.V.P, The New School, former Educational Project Director, IBM Watson

Panelist 3: Yang Zhou. Vice President, Vipkid Big Data and AI Center.

12:00-13:30 Networking/Lunch Break

13:30-14:00 Speech: Prof. Yolanda Gil, Chair of AAAI, Prof. of USC

14:00-14:10 Million US Dollars Squirrel AI Scientific Achievement Award Project -“AI Nobel” Talk

Moderator: Will Thompson, Forbes AI Magezine

Guest: Prof. Yolanda Gil, Chair of AAAI, Prof. of USC

Guest: Derek Li, founder, Squirrel AI learning by Yixue Group

14:10-14:40 Speech: Michael Moe, founder of GSV Capital, Co-founder of ASU-GSV, AIAED Industry Program Chair

14:40-15:00 Speech: Eric Zhengda Yang, Founder, iTutorGroup

15:00-15:20 Speech: Prof. Wen Zhu Zhang, Director of Li Si Chen AI Lab

15:20-15:45 Panel 2: AI Education and Technology Forum

Moderator: Alex Beard, Author of *Natural Born Learners*

Panelist 1: Dr. Marie Bienkowski, Center Director, Stanford Research Institute

Panelist 2: Professor Ken Koedinger, Computer Science and Psychology, CMU

Panelist 3: Dr. Ani Aghababayan, Chief data scientist, McKinsey & Co.

Panelist 4: Dr. Wei Cui, Chief Scientist, Squirrel AI Learning by Yixue Group

15:45-16:00 Speech: Wei Zhou, China Creation Ventures(CCV)

16:00-16:20 Speech: Liyun Ru, Founder, Putaoabc

16:20-16:50 Panel 3: Global AI Education Panel

Moderator: Yuanpu Huang, Founder, IYIOU.COM

Panelist 1: Steve Ritter, founder, Overseas AI Education Carnegie Learning

Panelist 2: Josine Verhagen, Senior Director, Psychometrics and Data Science, Kidaptive

Panelist 3: Sunil Gunderia, Chief Strategy Officer, Age of Learning

16:50-17:05 Speech: Deloitte AI Adaptive Learning Report: Charlotte Lu, Leading Partner, Deloitte China Education

17:05-17:30 Speech: Alex Beard, Author of *Natural Born Learners*

17:00 End of Day 1

## May 25th Day 2

9:30-10:00 Speech: Ken Koedinger, Professor of Computer and Psychology, Carnegie Mellon University

10:00-10:30 Special Announcement: the Chinese version of *Rewiring Education*.  
John Couch, Vice President, Apple. Derek Li, Founder, Squirrel AI Learning. XiaoHui Chen, CEO, Cheers Publishing

10:30-10:50 Youth Education Speech: Dr. Cynthia Breazeal, Associate Prof. of Media Arts & Sciences, Director of Personal Robots Group at Media Lab, MIT

10:50-11:10 Lin Zhou, S.V.P, The New School, former Educational Project Director, IBM Watson

11:10-11:30 Speech: Dr. Kang Lee, Prof. of Psychology, University of Toronto, the 3<sup>rd</sup> AIAED Conference Advisory Committee Member

11:30-11:50 Speech: Dave Touretzky, Prof. of Computer Science, Carnegie Mellon University, AIAED Youth / AI4K12 Program Chair

12:00-13:30 Networking Break

13:30-14:00 Keynote Speech: Daniela Rus, Prof.& Director of CS & AI Lab, MIT, AIAED Advisory Committee Member

14:00-14:20 Speech: Yi Zhang, Founder, ZhangMen1-1

14:20-14:30 Award for AI Education

14:30-15:10 Youth TED Talk:  
TED-style talk1 (8 minutes)  
TED-style talk2 (8 minutes)  
TED-style talk3 (8 minutes)  
TED-style talk4 (8 minutes)  
TED-style talk5 (8 minutes)

15:10-15:20 AIAED Announcement: Best Paper  
Host: Dr. Xiangen Hu, Professor of Memphis University, Dean of School of Psychology, Center China Normal University  
Award by: Tom Mitchell, AIAED General Chair and Dr. Wei Cui, Chief Scientist, Squirrel AI Learning by Yixue Group

15:20-15:30 Best Paper Presentation 1

15:30-15:40 Best Paper Presentation 2

15:40-16:00 Speech: Paul Kim, CTO & Assistant Dean of Graduate School of Education, Stanford University

16:00-16:30 Closing Panel: the Future of Children's Education  
Moderator: Tracy Zhang, President of FTChinese.com

Panelist 1: Rose Luckin, AIED Chair, Prof. of Learner Centred Design, the UCL Knowledge Lab, the 3<sup>rd</sup> AIAED Conference Advisory Committee Member

Panelist 2: Tom Mitchell, Dean of School of Computer Science, Carnegie Mellon University & the 3<sup>rd</sup> AIAED Conference General Chair

Panelist 3: Dr. Xiangen Hu, Professor of Memphis University, Dean of School of Psychology, Center China Normal University

Panelist 4: Jason Zhou, CEO, Squirrel AI Learning by Yixue Group

16:30 End of the 3<sup>rd</sup> AIAED Conference

Technical Tracks (B1 floor):

5月24日 第一天

Day 1	分会场 1	分会场 2	分会场 3
9:30-11:15	主会场主旨演讲环节		
11:15-12:00	Design of Adaptive Learning Systems 自适应学习系统的设计	Educational Data Mining 教育领域数据挖掘	Natural Language Processing & Semantic Analysis 自然语言处理和语义分析
12:30-13:30	主会场论文 poster 讲演环节及午餐		
13:30-14:15	主会场主旨演讲环节		
14:15-17:00	Design of Adaptive Learning Systems 自适应学习系统的设计	Educational Data Mining 教育领域数据挖掘	Natural Language Processing & Semantic Analysis 自然语言处理和语义分析

5月25日 第二天

Day 2	分会场 1	分会场 2	分会场 3
9:30-11:15	主会场主旨演讲环节		
11:15-12:00	Design of Adaptive Learning Systems 自适应学习系统的设计	Machine Learning & Deep Learning 机器学习和深度学习的	Standards & Infrastructure: IEEE Adaptive Instructional

		应用	Systems & Federated Machine Learning 标准和基础建设: IEEE 自适应教育系统标准及联邦机器学习标准
12:00-12:30	Design of Adaptive Learning Systems 自适应学习系统的设计		Standards & Infrastructure: IEEE Adaptive Instructional Systems & Federated Machine Learning 标准和基础建设: IEEE 自适应教育系统标准及联邦机器学习标准
12:30-13:30	主会场论文 poster 讲演环节及午餐		
13:30-14:15	主会场主旨演讲环节		
14:15-15:30	Design of Adaptive Learning Systems 自适应学习系统的设计	Machine Learning & Deep Learning 机器学习和深度学习的应用	Standards & Infrastructure: IEEE Adaptive Instructional Systems & Federated Machine Learning 标准和基础建设: IEEE 自适应教育系统标准及联邦机器学习标准
15:30-16:00	Design of Adaptive Learning Systems 自适应学习系统的设计	Machine Learning & Deep Learning 机器学习和深度学习的应用	AAAI AI4K12 Youth Program 少儿演讲及机器人
16:00-16:30	主会场演讲环节		AAAI AI4K12 Youth Program 少儿演讲及机器人
16:30-17:00			AAAI AI4K12 Youth Program 少儿演讲及机器人

## 分会场

5月24日

9:30-11:00 主会场环节

11:05-11:10 分会场转场

**分会场 1 自适应学习系统的设计**（联合主席: 卡耐基梅隆大学教授 Ken Koedinger, WestEd 高级研究员 Mingyu Feng）

11: 15-11:16 自适应学习系统的设计联合主席: Ken Koedinger、 Mingyu Feng 介绍环节/开幕

11: 20-11: 30 McKinsey & Co. 首席数据科学家 Ani Aghababyan 智适应学习的生态系统演讲(Adaptive Learning Ecosystem)

11: 30-11: 40 Carnegie Learning 联合创始人、首席科学家 Steve Ritter 概念变化的智适应(Adapting to Conceptual Change)

11:45-11:55 North Carolina State University 助理教授 Noboru Matsuda 基于证据的无效内容检测以实现课件的自我改进 (Evidence-based detection of ineffective content towards a realization of self-improving courseware) 演讲, 合作者: Machi Shimmei

## **分会场 2 教育数据挖掘 (联合主席: Age of Learning 公司学习和数据科学负责人 Elizabeth Owen、ACT Inc. 高级研究科学家 Michael Yudelson)**

11: 15-11:16 介绍环节/开幕

11: 20-11: 30 UC Berkeley 助理教授 Zachary A. Pardos 可扩展的校园个性化课程指导演讲 (Scalable Personalized Course Guidance On Campus)

11: 30-11: 40 密歇根大学研究员 Yinbin Lei、Jun Zhang 知识/学习空间中的操作演讲(Operators in Knowledge/Learning Spaces )

11: 45-11: 55 伦敦大学学院教育数字技术助理教授 Mutlu Cukurova 学习分析作为教育中的 AI 延伸: 多模式机器学习与多模式学习分析 (Learning Analytics as AI Extenders in Education: Multimodal Machine Learning versus Multimodal Learning Analytics)

## **分会场 3 自然语言处理和语义分析 (联合主席: 孟菲斯大学心理系教授 Art Graesser 、IBM Watson 人工智能实验室研究员吴凌飞)**

**Day 1 Session Room 3: Natural Language Processing & Semantic Analysis**

11: 15-11:16 自然语言处理和语义分析联合主席: 孟菲斯大学心理系教授 Art Graesser 、IBM Watson 人工智能实验室研究员吴凌飞介绍环节/开幕

11: 20-11: 40 University of Illinois at Urbana-Champaign Heng Ji 教授 加快科学教育与生产的 PaperRobot 演讲 (PaperRobot for Speeding up Scientific Education and Production)

11:45-11:55 University of Michigan 研究员/助理教授 Nia Dowell 为未来做好准备: 将群体通信分析作为促进数字化团队互动过程中适应性支持的工具 (Preparing

for the Future: Group Communication Analysis as a Tool to Facilitate Adaptive Support during Digitally-Meditated Team Interactions)

12: 00-1: 30 午餐

12: 15-13: 25 Poster 论文展示 +午餐

1: 30-2: 10 主会场环节

**分会场 1 自适应学习系统的设计** (联合主席: 卡耐基梅隆大学教授 Ken Koedinger, WestEd 高级研究员 Mingyu Feng)

14: 15-14: 25 University of Southern California 研究科学家 Ning Wang 通过向教育代理器解释来学习演讲 (Learning by Explaining to a Pedagogical Agent)

14:30-14:40 麦考瑞大学计算系教授 Deborah Richards 可解释的人工智能: 可帮助学习者反思的教学代理器演讲 (Explainable AI: Transparent Pedagogical Agents that help the Learner to Reflect)

14: 45-14: 55 卡耐基梅隆大学系统科学家 Erik Harpstead 智适应性教育中使用模拟学习者演讲 (The Use Simulated Learners in Adaptive Education ) 合作者: Christopher Maclellan, Daniel Weitekamp and Kenneth R. Koedinger

15:00-15:10 北京师范大学副教授 Yu Lu 人工智能驱动的教育互动机器人演讲 (AI-Driven Interactive Robot for Education)

15:15-15:25 Age of Learning 公司学习和数据科学负责人 Elizabeth Owen 为青少年学生服务的数据驱动的智适应设计中学习科学基础演讲 (Learning Science Foundations in Data-driven Adaptive Design for Young Students)

15: 30-15: 40 SRI International 斯坦福国际研究院学习技术中心战略研究与创新主任 Phil Vahey 从学习工程视角看儿童早期学习的适应性反馈演讲 (Adaptive Feedback for Early Childhood Learning: A Learning Engineering Perspective) 合作者: Ashley Lewis, Ximena Dominguez and Jillian Orr

**分会场 2 教育数据挖掘** (联合主席: Age of Learning 公司学习和数据科学负责人 Elizabeth Owen、ACT Inc. 高级研究科学家 Michael Yudelson)

14: 15-14: 25 Kidaptive 公司数据科学高级主任 Josine Verhagen 用于在线学习环境评估的贝叶斯动态模型演讲 (Bayesian dynamic models for assessment in online learning environments)

14:30-14:40 杭州师范大学研究员 May Lee 将大学生的个人因素与心理健康联系起来 – 一种大数据分析方法的演讲 (Linking university students' personal factors to their mental health -- A bigdata analytic approach ) 合作者: Allison Lin, Junbang Zhao, Si Jia Wu, Genyue Fu and Kang Lee



14: 45-14: 55 中国科学技术大学 Zhou Tao 有序性预测学业成绩：校园生活方式的行为分析演讲 (Orderliness predicts academic performance: behavioural analysis on campus lifestyle)

15:00-15:10 Carnegie Learning, Inc. 研究科学家 Steve Fancsali 自适应学习中的图形因果建模与跟踪数据演讲 (Graphical Causal Modeling & Trace Data in Adaptive Learning)

15:15-15:25 Arizona State University 信息学和决策系统工程学院的助理教授 Sharon Hsiao 计算技术教育中的人工智能：计算机教育的视觉学习分析演讲 (AI in CS Edu: Visual Learning Analytics for Computing Education)

15: 30-15: 40 卡耐基梅隆大学助理教授 John Stamper 演讲(主题未定)

### **分会场 3 自然语言处理和语义分析** (联合主席：孟菲斯大学心理系教授 Art Graesser 、IBM Watson 人工智能实验室研究员吴凌飞)

14:15-14:25 伦斯勒理工学院计算机科学系博士 Yu Chen 知识库问题回答及其在适应性教育中的潜在应用演讲 (Knowledge Base Question Answering and Its Potential Applications in Adaptive Education)

14: 30-14: 40 中科院副研究员刘康 通过端到端神经模型从文本生成关系事实演讲 (Generating Relational Facts from texts by an End-to-End Neural Model)

14: 45-14: 55 北京大学教授 Yansong Feng 用知识回答自然语言问题演讲 (Answering Natural Language Questions with Knowledge)

15: 00-15: 10 DePaul University 副教授 Peter Hastings、评估 NLP 技术在学生解释中识别结构演讲 (Evaluating NLP Techniques for Identifying Structure in Student Explanations) 合作者：Simon Hughes、M. Anne Britt

15: 15-15: 25 南加州大学计算机系教授 William Swartout 与历史的对话：跨越时空分享经验演讲 (Conversations with History: Sharing Experiences Across Time and Space) 合作者：David Traum, Anton Leuski and Ron Artstein

15: 30-15: 40 浙江工商大学教授 Ligang Dong 基于深度学习的自动问答系统演讲 (Automatic Question Answering System Based on Deep Learning) 合作者：Hong Shao, Liujun Tang, Mengying Wu and Xian Jiang

15: 45-16: 10 休息

### **分会场 1 自适应学习系统的设计** (联合主席：卡耐基梅隆大学教授 Ken Koedinger, WestEd 高级研究员 Mingyu Feng)

16:15-16:25 中国科学技术大学副教授 Qi Liu 利用知识追踪进行智能教育演讲 (Exploiting Knowledge Tracing for Intelligent Education) 合作者：Yu Yin 、Shiwei Tong

16: 30-16: 40 George Mason University 助理教授 Michael Eagle 在交互式环境中建模, 理解和更改行为演讲 (Modeling, Understanding, and Changing Behavior in Interactive Environments)

16: 45-16: 55 WestEd 国家认知和数学学习中心主任 Jodi Davenport 将人类专业知识和人工智能整合到工程新学习系统中: 化学实例演讲 (Integrating human expertise and AI in engineering new learning systems: Examples from chemistry)

17:00-17:10 Rowan University 教授 Ying Tang 通过个性化教学和需要意识的游戏优化学生学习 (PING) 演讲 (Optimize Student Learning through Personalized Instruction and Need-aware Gaming (PING))

## **分会场 2 教育数据挖掘 (联合主席: Age of Learning 公司学习和数据科学负责人 Elizabeth Owen、ACT Inc. 高级研究科学家 Michael Yudelson)**

16:15-16:25 MARi 首席数据科学家 Ran Liu 收集和使用全人数据的平台以改善学习成果预测并为干预措施的选择提供信息演讲 (A platform for collecting and using whole-person data to improve learning outcome predictions and inform the selection of interventions)

16: 30-16: 40 北京交通大学 Xuetao Tian 基于中小学生在在线写作的弱势合作特质预测框架演讲 (A Weak Cooperation Trait Prediction Framework for Schoolchildren Based on Online Writing) 合作者: Fang Luo, Liping Jing and Enrui Cui

16: 45-16: 55 Cathleen Li、UC Berkeley 助理教授 Zachary A. Pardos 关于可汗学院的记忆驱动建议 (Memory-driven Recommendation on Khan Academy)

17:00-17:10 Junchen Feng、Qiushi Xu 贝叶斯诊断跟踪模型: 多知识组件的动态跟踪模型演讲 (Bayesian Diagnosis Tracing Model: A Dynamic Tracing Model of Multiple Knowledge Components)

## **分会场 3 自然语言处理和语义分析 (联合主席: 孟菲斯大学心理系教授 Art Graesser、IBM Watson 人工智能实验室研究员吴凌飞)**

16: 15-16: 25 中国科学技术大学教授汪增福、Lei Xiao 一种语音驱动的 3D 面部可视化系统 演讲 (A Speech Driven 3D Facial Visualization System)

16:30-16:40 罗格斯大学教授 Janice Gobert、Haiying Li、Rachel Dickler 将学生的科学研究能力与科学写作能力进行比较演讲 (DUSTING OFF THE MESSY MIDDLE: COMPARING STUDENTS' SCIENCE INVESTIGATION COMPETENCIES WITH THEIR SCIENCE WRITING COMPETENCIES)

16: 45-16: 55 Alelo Inc. 总裁兼首席执行官 Lewis Johnson 人工智能可以改变学习的七个角色演讲 (The Seven Roles that AI Can Play to Transform Learning)

17: 00-17: 10 IBM China 高级顾问经理屈静 IBM Watson Tutor: 基于对话的智能辅导系统 (IBM Watson Tutor: Dialogue-Based Intelligent Tutoring Systems) 合作者: Lingfeng Wu、Po Yang

5:15-8:30 社交活动、晚餐(暂定)

5月25日

9:30-11:00 主会场环节

11:05-11:10 分会场转场

### **分会场1 智适应系统的自我改进** (主席: 美国孟菲斯大学心理学教授胡祥恩)

11:15-11:25 ACT Inc. 高级研究科学家 Michael Yudelson 现代自适应学习和评估引擎演讲 (Modern Adaptive Learning and Assessment Engines)

11:30-11:40 西班牙国家研究委员会 (CSIC) AI 研究院 (IIIA) 副院长 Carles Sierra 课堂上的多元化团队演讲 (Diverse Teams in the Classroom) 合作者: Carme Roig, Ewa Andrejczuk, Juan Antonio Rodriguez-Aguilar, Yolanda Parejo

11:45-11:55 WestEd 高级研究员 Mingyu Feng 从实验室中思考: 在课堂中设计和实现自适应混合学习的注意事项演讲 (Think Out of the Labs: Considerations for Design and Implementation of Adaptive Blended Learning in Classrooms)

12:00-12:10 SMZTeaching 研究员 Susan Zvacek 适应性学习: 比我们想象的更近? 演讲 (Adaptive Learning: Closer Than We Think?)

12:15-12:25 Bogazici University 教授 Okyay Kaynak 颠覆时代的工程教育演讲 (Engineering Education at the Age of Disruption)

### **分会场2 机器学习和深度学习** (联合主席: 美国佛罗里达大学电子和计算机工程学院

教授 Andy Li、IBM Watson 人工智能实验室研究员吴凌飞)

11:15-11:20 开场介绍

11:20-11:40 华为MIND平台 AI 首席架构师 Yinglong Xia 构建企业使用的图形分析和学习平台 (Building graph analytics and learning platforms for enterprise use)

11:45-12:10 海报展示布置

### **分会场3 IEEE 智适应系统标准、IEEE 联合机器学习标准和基础建设** (联合主席: IEEE 委员会成员、前 IEEE 学习技术标准委员会主席 Robby Robson、Texas Advanced Computing Center 研究工程师、数据挖掘与统计经理 Weijia Xu、WeBank 人工智能商业发展专家 Xiang Cao)

11:15-11:16 开场介绍

11:15-11:30 Texas Advanced Computing Center 研究工程师、数据挖掘与统计经理 Weijia Xu 加强网络基础设施的可扩展计算教育演讲 (Enhancing Scalable Computing Education on Cyberinfrastructure)

合作者: Hui Zhang, Ruizhu Huang and Yige Wang

11: 35-11: 45 Watson & Cloud Advocate Andrew Zhang Watson 在教育的应用演讲 (Watson Anywhere in Education)

11:50-12:00 匹兹堡超级计算中心人工智能和大数据负责人 Paola Buitrago、Nicholas Nystrom Bridges, 智适应教育的灵活且异质的 HPC 演讲 (Bridges, a Flexible and Heterogeneous HPC for Adaptive Education)

12:05-12:15 Chao Wu 银河学习 - 立场论文演讲 (Galaxy Learning - A Position Paper)

12: 20-12: 25 Daniele Di Mitri 多模式学习分析渠道演讲 (The Multimodal Learning Analytics Pipeline) 合作者: Jan Schneider, Marcus Specht and Hendrik Drachsler

12: 15-13: 25 Poster 论文展示 +午餐  
(\*12:30 分会场 1、3 结束)

13: 30-14: 10 主会场演讲

### **分会场 1 智适应系统的自我改进 (主席: 美国孟菲斯大学心理学教授胡祥恩)**

14: 15-14: 25 IEEE 高级会员 Roberto Saracco 将认知数字双胞胎应用于职业教育演讲 (Applying Cognitive Digital Twin to Professional Education)

14: 30-14: 40 斯坦福国际研究院教育研究科学家 Shuai Wang 利用减少教学材料动机调查 (RIMMS) 检验中国中学生的动机: 教育技术设置中的验证研究演讲 (Examining Chinese Middle School Students' Motivation Using the Reduced Instructional Materials Motivation Survey (RIMMS): A Validation Study in the Education Technology Setting) 合作者: Yuning Xu, Marie Bienkowski, Wei Cui, KP Thai and Richard Tong

14: 45-14: 55 孟菲斯大学心理系博士 Genghu Shi 在自适应智能学习系统中实现自适应动机干预演讲 (Implementing Adaptive Motivation Interventions in an Adaptive Intelligent Learning System) 合作者: Anne M. Lippert and Xiangen Hu

15: 00-15: 10 Zhou Long Multiagent 可以做什么? 社会认知冲突的诱导和调节对学习的影响演讲 (What Can Multiagent Do? Effects of Inducing and Regulating Socio-cognitive Conflict on Learning) 合作者: Dehong Luo, Hongli Gao and Xiangen Hu

15: 15-15: 25 多伦多大学博士 Zhenhua Xu 走向情感: 使视频游戏体验有效和吸引人演讲 (Toward Emotions Making a Video Game Experience Effective and Engaging) 合作者: Earl Woodruff

15: 30-15: 40 多伦多大学教授 Eunice Eunhee Jang 通过技术丰富的环境和机器学习促进学生在认知, 元认知和影响方面的成长: 承诺和挑战演讲 (Advancing Student Growth in Cognition, Metacognition, and Affect through Technology-rich

Environments and Machine Learning: Promises and Challenges)

15: 45-15: 55 ETS 副研究科学家 Blair Lehman 在学习过程中促进经验和解决困惑演讲 (Promoting Experiences and Resolution of Confusion during Learning)

## **分会场 2 机器学习和深度学习(联合主席: 美国佛罗里达大学电子和计算机工程学院**

**教授 Andy Li、IBM Watson 人工智能实验室研究员吴凌飞)**

14: 15-14: 25 North Carolina State University 助理教授 Min Chi 教学政策归纳的综合离线分层强化学习演讲 (Integrated Offline Hierarchical Reinforcement Learning for Pedagogical Policy Induction) 合作者: Hamoon Azizsoltani and Guojing Zhou

14: 30-14: 40 University of Illinois at Urbana - Champaign 助理教授 Bo Li 对抗环境中的安全学习演讲 (Secure Learning in Adversarial Environments)

14:45-14:55 IBM Research AI 研究员 Tengfei Ma 深入学习教育图表演讲 (Deep Learning on Graphs in Education)

15:00-15:10 密歇根州立大学计算机科学与工程系 助理教授 Jiliang Tang 深度学习符合教育: 机遇与挑战演讲 (Deep Learning Meets Education: Opportunities and Challenges)

15: 15-15: 25 Columbia University Teachers College 访问助理教授 Charles Lang 将教师纳入机器学习渠道演讲 (Including Teachers in the Machine Learning Pipeline)

15: 30-15: 40 华中师范大学计算机学院教授蒋兴鹏、Xinzhe Pang 基于迭代随机森林算法的微生物种间相互作用研究演讲 (Discovering the Inter-species Interaction among Microorganisms Based on Iterative Random Forest Algorithm)

15:45-15:55 西弗吉尼亚大学博士 Lingwei Chen, Shifu Hou、Yanfang Ye 基于异构网络嵌入的模型增强堆栈溢出中的代码安全性演讲 (Enhancing Code Security in Stack Overflow over Heterogeneous Network Embedding based Model)

## **分会场 3 IEEE 智适应系统标准、IEEE 联合机器学习标准和基础建设(联合主席: IEEE 委员会成员、前 IEEE 学习技术标准委员会主席 Robby Robson、Texas Advanced Computing Center 研究工程师、数据挖掘与统计经理 Weijia Xu、WeBank 人工智能商业发展专家 Xiang Cao)**

14: 15-14: 25 IEEE 学习技术标准委员会主席 Avron Barr、IEEE 委员会成员、前 IEEE 学习技术标准委员会主席 Robby Robson 学习者数据的基础: 支持 AI 增强学习的基础设施演讲 (The Locus of Learner Data: Infrastructure to Support AI-Enhanced Learning)

14:30-14:40 IEEE 委员会成员、前 IEEE 学习技术标准委员会主席 Robby Robson、Jeanne

Kitchens 美国南方伊利诺伊大学(SIU) 劳动力发展中心副主任 用于提高学历文凭市场透明度的元数据演讲 (Metadata for Improving Transparency in the Credentialing Marketplace)

14: 45-14: 55 Common Sense Media Privacy Counsel Jill Bronfman 教育科技中的 AI: 学生数据使用的前沿 (AI in Edtech: Frontiers in Student Data Use) 合作者: Girard Kelly、Jeff Graham

15: 00-15: 10 专业顾问和公共演讲者 Eric Shepherd 可信赖的评估演讲 (Trustable Assessments)

15: 15-15: 25 IEEE 委员会成员、前 IEEE 学习技术标准委员会主席 Robby Robson 评估能力而不是学习成果演讲 (Assessing Competencies Instead of Learning Outcomes)

### 15:30-16:55 分会场 3 青少年论坛

#### 5.24

#### **Session Room 1: Design of Adaptive Learning Systems**

Co-Chair: Dr. Ken Koedinger (Carnegie Mellon University)

Dr. Mingyu Feng (WestEd)

11: 15-11: 30 Ani Aghababyan  
Adaptive Learning Ecosystem

11: 30-11: 45 Steve Ritter Adapting to Conceptual Change

11:45-12:00 Okyay Kaynak  
Engineering Education at the Age of Disruption

#### **Day 1 Session Room 2: Educational Data Mining**

(Co-chairs: Elizabeth Owen(Age of Learning), Michael Yudelson (ACT Inc.)

11: 15-11: 30 Zachary A. Pardos  
Scalable Personalized Course Guidance On Campus

11: 30-11: 45 Yinbin Lei, Jun Zhang  
Operators in Knowledge/Learning Spaces

11: 45-12: 00 Mutlu Cukurova  
Learning Analytics as AI Extenders in Education: Multimodal Machine Learning versus Multimodal Learning Analytics

#### **Day 1 Session Room 3: Natural Language Processing & Semantic Analysis**

(Co-chairs Art Graesser (University of Memphis), Lingfei Wu (IBM Watson)

11: 15-11: 45 Heng Ji



PaperRobot for Speeding up Scientific Education and Production

11:45–12:00 Lewis Johnson

The Seven Roles that AI Can Play to Transform Learning

**12: 00–13: 30 Poster + Lunch**

**13: 30–14: 10 Main Stage**

**Session Room 1: Design of Adaptive Learning Systems**

Co-Chair: Dr. Ken Koedinger (Carnegie Mellon University)

Dr. Mingyu Feng (WestEd)

14: 15–14: 30 Ning Wang

Learning by Explaining to a Pedagogical Agent

14:30–14:45 Deborah Richards

Explainable AI: Transparent Pedagogical Agents that help the Learner to Reflect

14: 45–15: 00 Erik Harpstead

The Use Simulated Learners in Adaptive Education

Co-authors: Christopher Maclellan, Daniel Weitekamp and Kenneth R. Koedinger

15:00–15:15 Yu Lu

AI-Driven Interactive Robot for Education

15:15–15:30 Elizabeth Owen

Learning Science Foundations in Data-driven Adaptive Design for Young Students

15: 30–15: 45 Phil Vahey

Adaptive Feedback for Early Childhood Learning: A Learning Engineering Perspective

Co-authors: Ashley Lewis, Ximena Dominguez and Jillian Orr

**Day 1 Session Room 2: Educational Data Mining (Co-chairs: Elizabeth Owen(Age of Learning), Michael Yudelson (ACT Inc.))**

14: 15–14: 30 Josine Verhagen

Bayesian dynamic models for assessment in online learning environments

14:30–14:45

May Lee, Allison Lin, Junbang Zhao, Si Jia Wu, Genyue Fu and Kang Lee

Linking university students' personal factors to their mental health -- A bigdata analytic approach

14: 45–15: 00

Zhou Tao

Orderliness predicts academic performance: behavioural analysis on campus lifestyle

15:00–15:15 Stephen Fancsali  
Graphical Causal Modeling & Trace Data in Adaptive Learning

15:15–15:30  
Sharon Hsiao  
AI in CS Edu: Visual Learning Analytics for Computing Education

15: 30–15: 45 John Stamper  
Finding Strategies Beyond Automatic Hint Generation

**Day 1 Session Room 3: Natural Language Processing & Semantic Analysis  
(Co-chairs Art Graesser (University of Memphis), Lingfei Wu (IBM Watson))**

14:15–14:30 Janice Gobert, Haiying Li and Rachel Dickler  
Dusting Off the Messy Middle: Comparing Students' Science Investigation Competencies with Their Science Writing Competencies

14: 30–14: 45 William Swartout, David Traum, Anton Leuski and Ron Artstein  
Conversations with History: Sharing Experiences Across Time and Space

14: 45–15: 00  
Nia Dowell  
Preparing for the Future: Group Communication Analysis as a Tool to Facilitate Adaptive Support during Digitally-Meditated Team Interactions

15: 00–15: 15  
Peter Hastings, Simon Hughes and M. Anne Britt  
Evaluating NLP Techniques for Identifying Structure in Student Explanations

15: 15–15: 30 Kang Liu  
Generating Relational Facts from texts by an End-to-End Neural Model

15: 30–15: 45 Yansong Feng  
Answering Natural Language Questions with Knowledge

15: 45–16: 15 Break

**Day 1 Session Room 1: Design of Adaptive Learning Systems**  
Co-Chair: Dr. Ken Koedinger (Carnegie Mellon University)  
Dr. Mingyu Feng (WestEd)

16:15–16:30 Qi Liu  
Exploiting Knowledge Tracing for Intelligent Education  
Co-authors: Yu Yin , Shiwei Tong



16: 30-16: 45 Michael Eagle  
Modeling, Understanding, and Changing Behavior in Interactive Environments

16: 45-17: 00 Jodi Davenport  
Integrating human expertise and AI in engineering new learning systems: Examples from chemistry

17:00-17:15 Ying Tang  
Optimize Student Learning through Personalized Instruction and Need-aware Gaming (PING)

**Day 1 Session Room 2: Educational Data Mining (Co-chairs: Elizabeth Owen(Age of Learning), Michael Yudelson (ACT Inc.)**

16:15-16:30 Ran Liu  
A platform for collecting and using whole-person data to improve learning outcome predictions and inform the selection of interventions

16: 30-16: 45 Xuetao Tian  
A Weak Cooperation Trait Prediction Framework for Schoolchildren Based on Online Writing  
Co-authors: Fang Luo, Liping Jing and Enrui Cui

16: 45-17: 00 Cathleen Li, Achary A. Pardos  
Memory-driven Recommendation on Khan Academy

17:00-17:15 Junchen Feng, Qiushi Xu  
Bayesian Diagnosis Tracing Model: A Dynamic Tracing Model of Multiple Knowledge Components

**Day 1 Session Room 3: Natural Language Processing & Semantic Analysis (Co-chairs Art Graesser (University of Memphis), Lingfei Wu (IBM Watson))**

16: 15-16: 30  
Zengfu Wang, Lei Xiao  
A Speech Driven 3D Facial Visualization System

16:30-16:45  
Yu Chen, Lingfei Wu and Mohammed J. Zaki  
Dusting Off The Messy Middle: Knowledge Base Question Answering and Its Potential Applications in Adaptive Education

16: 45-17: 00

Jing Qu, Lingfei Wu and Po Yang

IBM Watson Tutor: Dialogue-Based Intelligent Tutoring Systems

17: 00-17: 10

Ligang Dong, Hong Shao, Liujun Tang, Mengying Wu and Xian Jiang

Automatic Question Answering System Based on Deep Learning

5:15-8:30 Social & Dinner

5.25

9: 30-11: 00 Main Stage

11: 00-11: 15 Switch to Technical track breakout rooms

**Design of Adaptive Learning Systems**

**Co-Chairs: Dr. Ken Koedinger (Carnegie Mellon University), Dr. Mingyu Feng (WestEd)**

11: 15-11: 30 Michael Yudelson

Modern Adaptive Learning and Assessment Engines

11: 30-11: 45 Carles Sierra

Diverse Teams in the Classroom

Co-authors: Carme Roig, Ewa Andrejczuk, Juan Antonio Rodriguez-Aguilar, Yolanda Parejo

11: 45-12: 00 Mingyu Feng Think Out of the Labs: Considerations for Design and Implementation of Adaptive Blended Learning in Classrooms

12: 00-12: 15 Noboru Matsuda and Machi Shimmei

Evidence-based detection of ineffective content towards a realization of self-improving courseware

12: 15-12: 30 Susan Zvacek

Adaptive Learning: Closer Than We Think?

**Day 2 Session Room 2: Machine Learning & Deep Learning (Co-chairs: Andy Li (University of Florida), Lingfei Wu (IBM Watson))**

11: 15-11: 45

Jiliang Tang

Deep Learning Meets Education: Opportunities and Challenges

11:45-12:15

Min Chi, Hamoon Azizsoltani and Guojing Zhou  
Integrated Offline Hierarchical Reinforcement Learning for Pedagogical Policy Induction

**Day 2 Session Room 3: Standards & Infrastructure**

**(Co-chairs: Ribby Robson (IEEE), Weijia Xu (Texas Advanced Computing Center), Xiang Cao (WeBank))**

11: 15-11: 30 Weijia Xu  
Enhancing Scalable Computing Education on Cyberinfrastructure  
Co-authors: Hui Zhang, Ruizhu Huang and Yige Wang

11: 30-11: 45 Andrew Zhang  
Watson Anywhere in Education

11: 45-12: 00 Paola Buitrago, Nicholas Nystrom  
Bridges, a Flexible and Heterogeneous HPC for Adaptive Education

12:00-12:15 Chao Wu  
Galaxy Learning - A Position Paper

12: 15-12: 30 Daniele Di Mitri  
The Multimodal Learning Analytics Pipeline  
Co-authors: Jan Schneider, Marcus Specht and Hendrik Drachsler

12: 30-13: 30 Poster+Lunch  
(\*12:30: Room1, 3 session end)

13: 30-14: 15 Mainstage

**Design of Adaptive Learning Systems**

**Co-Chairs: Dr. Ken Koedinger (Carnegie Mellon University), Dr. Mingyu Feng (WestEd)**

14: 15-14: 30 Roberto Saracco  
Applying Cognitive Digital Twin to Professional Education

14: 30-14: 45 Shuai Wang  
Examining Chinese Middle School Students' Motivation Using the Reduced Instructional Materials Motivation Survey (RIMMS): A Validation Study in the Education Technology Setting  
Co-authors: Yuning Xu, Marie Bienkowski, Wei Cui, KP Thai and Richard Tong

14: 45-15: 00 Genghu Shi  
Implementing Adaptive Motivation Interventions in an Adaptive Intelligent Learning System  
Co-authors: Anne M. Lippert and Xiangen Hu

15: 00-15: 15 Zhou Long

What Can Multiagent Do? Effects of Inducing and Regulating Socio-cognitive Conflict on Learning

Co-authors: Dehong Luo, Hongli Gao and Xiangen Hu

15: 15-15: 30

Zhenhua Xu)

Toward Emotions Making a Video Game Experience Effective and Engaging)

Co-author: Earl Woodruff

15: 30-15: 45

Eunice Eunhee Jang

Advancing Student Growth in Cognition, Metacognition, and Affect through Technology-rich Environments and Machine Learning: Promises and Challenges

15: 45-16: 00 Blair Lehman

Promoting Experiences and Resolution of Confusion during Learning

**Day 2 Session Room 2: Machine Learning & Deep Learning (Co-chairs: Andy Li (University of Florida), Lingfei Wu (IBM Watson))**

14: 15-14: 25 Yanjie Fu

Enhancing Feature Subspace Exploration for Student Performance Prediction via Reinforcement Learning

14: 30-14: 45 Tengfei Ma

Deep Learning on Graphs in Education

14: 45-15: 00

Bo Li

Secure Learning in Adversarial Environments

15:00-15:15 Charles Lang

Including Teachers in the Machine Learning Pipeline

15:00-15:15 Charles Lang (Columbia University Teachers College)

Including Teachers in the Machine Learning Pipeline

15: 15-15: 30 Xinzhe Pang, Xingpeng Jiang

Discovering the Inter-species Interaction among Microorganisms Based on Iterative Random Forest Algorithm

15:30-15:45 Lingwei Chen, Shifu Hou, Yanfang Ye

Enhancing Code Security in Stack Overflow over Heterogeneous Network Embedding based Model

**Day 2 Session Room 3: Standards & Infrastructure**

**(Co-chairs: Robby Robson (IEEE), Weijia Xu (Texas Advanced Computing Center),**

**Xiang Cao (WeBank))**

14: 15-14: 30 Avron Barr, Robby Robson

The Locus of Learner Data: Infrastructure to Support AI-Enhanced Learning

14:30-14:45 Robby Robson, Jeanne Kitchens

Metadata for Improving Transparency in the Credentialing Marketplace

14: 45-15: 00 Jill Bronfman, Girard Kelly and Jeff Graham

AI in Edtech: Frontiers in Student Data Use

Co-authors: Girard Kelly, Jeff Graham

15: 00-15: 15 Eric Shepherd

Trustable Assessments

15: 15-15: 30 Robby Robson

Assessing Competencies Instead of Learning Outcomes

**15:45-17:00 Youth Track**