院友发展经历访谈

优秀的前辈能够提供非常宝贵的经验。本版院友发展报告对 8 位中德工程学院的院友进行了采访。8 位优秀的院友来自不同领域，有着不同背景。采访者从攻读博士、留德经历、中德职场、中德教育、具有中德双重背景的人才等方面与 8 位院友受访者进行了深度的对话。同时 8 位前辈也给留德的年轻人提出了很多宝贵的建议。

8 位嘉宾均是本科毕业于同济大学中德工程学院，并且覆盖了中德工程学院的四个不同的专业。目前在中德两国的人工智能（AI）、汽车、能源、芯片等行业工作。他们是：

刘自源：04 级机械电子工程专业，现任慕尼黑华为研究院机器人技术研发总监。获慕尼黑工业大学电信工程专业硕士学位，后在西门子开展机器人方向研究，并获博士学位。毕业后曾自主创业一年，后以研发科学家身份加入西门子团队。18 年底加入阿里达摩院从事机器人相关的技术研发和产品设计。

张虎臣：04 级汽车服务工程专业，硕士毕业于德国亚琛工业大学汽车专业，博士学位通过德国宝马公司和亚琛工业大学联合培养完成。曾任德国宝马公司整车研发配置，软件研发项目经理，现任宝马公司整车成本控制项目经理。

林钢：05 级建筑设施智能技术专业（现为建筑电气与智能化专业），大四在慕尼黑交换学习。研究生就读于亚琛工业大学能源技术专业。毕业后从事燃气轮机研究工作，15 年回国创业，创办上海慕帆动力科技有限公司。

蔡铓：05 级机械电子工程专业，大四在艾斯林根应用科学大学交换。研究生及博士就读于布伦瑞克工业大学。回国后加入华为 2012 实验室，目前在华为海思从事研究工作。

严骆锴：08 级建筑设施智能技术专业（现为建筑电气与智能化专业），硕士毕业于慕尼黑工业大学节能及可持续发展建筑专业，浙江大学能源与动力工程专业在职博士。现任江苏天合智慧分布式能源有限公司数字能源中心数字能源部总监。主要从事能源互联网、综合能源、电力交易以及低碳可持续发展领域的顶层设计、咨询以及信息化平台开发工作。对能源低碳运行，能源可持续发展有丰富的经验。

刘旸洋：09 级汽车服务工程，德国博世系统架构团队负责人，曾任自动驾驶视觉系统架构工程师。大四在艾斯林根应用科学大学 交换并在采埃孚（ZF）完成实习和论文。随后在斯图加特大学攻读车辆工程硕士，期间转向自动驾驶方向。毕业后先后在采埃孚和博世的自动驾驶部门工作。

肖胜卿：10 级建筑智能专业，现就职于德国博世热力技术公司，担任系统与需求工程师。大四时在茨维考应用科学大学交换学习，研究生就读于德累斯顿工业大学能源技术专业。17 年于开姆尼茨工业大学读博，获博士学位。

赖臻：11 级经济工程专业，蔚来欧洲商业采购团队经理。大四于柏林应用科学大学交换学习。于 2015 年开始在慕尼黑工业大学攻读企业经济专业（BWL）硕士，期间先后在英飞凌、蔚来资本和保时捷咨询（Porsche Consulting）完成实习和论文。毕业后加入蔚来欧洲采购团队。

话题 1：关于读博之路的经历与思考

为什么选择读博?

刘自源

我读博的契机源于在西门子做学生工时的一个机缘巧合。当时做的整体效果还不错，被隔壁的一个团队知道了，所以通过内推方式，直接就留在西门子继续读博了，做的是机器人方向，并挂靠在慕尼黑工业大学的电信学院下。

肖胜卿

选择读研是因为本科在德国交换的一年中没有真正的体验到什么东西，或者说没有真正学到太多东西。其次，也是觉得本科学历不太够，需要继续深造，在德国申请研究生是个很好的选择。最终收到德累斯顿工业大学和亚琛工大的录取通知书，比较了一下专业设置，德累斯顿是自己更倾向的选择。

肖胜卿

从德累斯顿毕业之后，就开始找工作，当时有几家公司是很不错的选择，也没有想要继续读博，只是单单想去做研究。后来发现学校的一个项目很不错，是由当时在德累斯顿做毕业论文的导师推荐的，主要是做小区的零碳供暖改造。回头来看，这个项目很有前瞻性，那时候才 17 年，国内应该还没有广泛提碳中和这个概念。德国当时只是说能源转型，也并没有大力强调。我当时觉得这个项目很不错，是一个联邦项目，项目非常大，跟之前学校的教授、茨维考市政府、慕尼黑的大学都有合作。在入职之后，我们所的老教授每次开会就会说，你们在大学里上班的人，不读博就很可惜。然后时间长了，就被老教授说动了，开始读博了。读博的选择和不选择，在一开始也是处于一个尝试的心态，之后就去所里面工作，发现收获还是挺多的。

肖胜卿

事实也证明读博还是很有用的，之前一直觉得读博好像没有什么太大的意义，甚至说挺浪费时间的。但是当我读完博，现在回头来看，对于在德国找工作，在德国读博真的很有用。如果大家想要继续深造的话，建议读博士，当然选对方向也是非常重要的事情。

读博过程中最重要的是什么？

蔡铚

我认为在读博的过程中，最重要的是保持求知欲和好奇心，不去拒绝新鲜的东西。在我做激光雷达的时候，华为甚至整个国内，只有十几个人在做这个全新的东西，于我而言很有意思。2018 年的时候我在华为做汽车方面的研究，电气研究团队只有五六人，我们都是第一批的开创者。当时在布伦瑞克选择缠绕理论（Wickelungstheorie）作为博士论文题目，博导说，这个题目很偏，五六十年来没有人去做，目前全世界大概只有五六个人在做这个研究，但是我依然选择了这个题目。

蔡铚

在学习和工作中找到一些小乐趣，并不断地精益求精，这是我的性格。现在国内正处于一个各项技术都在突破的阶段。很多时候很多地方，如果你愿意去尝试，能做出很多东西，甚至可以开拓一个新的领域。这种求知欲和探索心，会给你带来很大的优势。

刘自源

读博中最关键的我认为是自学的能力。因为进入大学之后，老师能教给你的东西只是一些入门的东西，你越往后面走，研究生博士期间，对某个领域或课题深挖的话，教授也不一定能告诉你应该去做什么东西。所以我觉得，如果想成为某个领域的专家，你需要有很强的自学能力。如果你对一个东西很感兴趣，就要不断深挖，去学习很多相关的知识，把看到的、听到的转化成自己的一种思考，然后自己做出判断，我觉得这是非常重要的能力，而不是等待其他人告诉你要做什么或是怎么做。像我们现在做的工作，已经在不断地拓展知识的边界，没有人告诉你这个东西在三年之后会是什么样，大家都在做不断的尝试。

读博之后会如何选择？

刘自源

2014 年博士毕业，做的一直是机器人的子方向——偏视觉感知这一块。博士毕业的时候选择了创业，当时想做一个照片数字化的互联网平台。通过这个 app，可以用手机一键扫描图片，生成电子照片，在家人及朋友圈里进行分享。虽然当时创业没有成功，但是学到了很多东西，对于如何带项目以及如何设计产品有了更多的思考。

肖胜卿

对于读博之后的选择，自己是非常倾向于企业的，这可能是我的个人喜好问题。如果你留在学校里，需要不停的发文章。当做出一个成果后，要去把它总结整理，然后发成各个期刊它们要求的样子，画它们需要的图，或者说就是写成它们的那种格式，我个人不是特别喜欢这个过程。在企业的话，跟市场更接近，大公司的预算也足够，有自己的实验室，可以做各种测试，能拿到各种数据。所以我当时就选择了找工作，到了博世热力，今年三月份开始做研发部门的管培生。我推荐大家去读博，但是至于读完博之后，你还要不要留在所里或是转去企业里，这个就是看个人的选择了，看这个事情是不是你喜欢做的，你能不能在当中找到成就感，以及对于你自己的发展，你能不能学到东西，这都是需要衡量的东西。

德国的高校博士和企业博士有何不同？

张虎臣

德国在高校和在企业里读博会有所不同。相比企业读博，在高校读博的时间一般而言会长一点。像亚琛工大、慕尼黑工大，基本上要读 5 年。高校读博的一般过程是，前两年跟着项目做东西，两年之后，才会确定每个人读博的课题。后面三年主要就是研究自己的课题。而大多数德国的企业博士都是 3 年制，一进公司就会给你一个明确的项目，并且有一定的资金，博士生更像是一个小的项目经理，在做研究的同时，为公司完成项目。另外，企业是不会给你博士头衔的，真正的博士头衔还是需要一个高校的教授来授予，所以还要去高校找一个教授来辅导博士的课题。所以相对而言的话，在高校读博，会更关注科研性上的成果。而在企业读博，需要在更短的时间内，既关注科研成果，也要保证项目在企业里的实用性。所以相对来说企业读博会有来自科研性、实用性以及时间上的三重压力。

话题 2：德国经历与中德职场

您经历的中德职场，有什么异同点？

刘自源

我觉得两方面可能各有优缺点吧。如果说一件事情是一项确定性的东西的话，那可能是中国的这种方式会更加高效一点，没有那么多讨论，大家把这个计划定出来，并且有比较严格的 KPI 考核制度，在有确定性目标和确定性结果产出预期的一种前提下，这种工作方式是最高效的。但如果你做的是科研创新的东西，那可能要思考一下，在一种更加自由的、宽泛的氛围下，在大家一起去讨论的前提下做事情，是不是会更好？这主要是取决于你的目标是什么，因为有些时候在科研中追逐的目标是一直在改变的，那么怎么去应对这种改变？中国的方式较为专注，我定了某个点，就一直朝着这个方向做下去。相比之下，西方的方式则更为自由，会开放讨论，更为灵活的追逐一些开放性目标。

赖臻

我的职场的经历大部分都是在一个德国的中国公司，蔚来（NIO）其实是一个比较国际化的环境，同事的国籍有 30 多种。就我个人的经历而言，我觉得中德职场两者本身没有明显的区别，我觉得都是人与人之间在一起共事，然后会有碰撞会有磨合。工作压力大不大还是要看个人，因为压力往往是来自于上司，如果你的上司能够把这些压力给到你，本身也是代表的对你的一种认可。因为他愿意，把一个比较重要的任务给到你。所以我觉得，很多时候压力都是双面的。我是比较喜欢这种压力型环境的，我会觉得，每天醒来第一件事我就脑中就想一遍，今天要做的事情，这周要做的事情，甚至一个更远的目标，所以我个人是比较享受的，但其他的人有可能不太喜欢这种高压的环境，那自然他们就会离开，所以是个人的选择吧。

您怎么看德国的经历对您在国内职场发展的帮助

严骆锴

（留学经历）说实话可能影响不大。也就是说，我即使没来德国，也可能会有现在的一个成长或者进步。当然你作为一个“海龟”，在一些行业，你相对光鲜亮丽的履历会成为你的一个敲门砖。但是也就是敲门这个作用仅此而已了。在你后面的职业生涯中，其实很多事还是要看自己真实的能力，以及自己处理人际关系的能力，甚至很大程度上要依靠一些运气。

严骆锴

我自己在德国的经历可能使我变得更加严谨了，可能相对来说也会有点死板。这件事是好是坏我觉得也很难讲，得具体情况具体分析。但是我本人并不后悔。在德国待了几年之后，我学会了该坚持的原则，那么就应该要坚持，我现在在职场中也是这样。哪怕说这会给我的职业发展带来不利的时候，我觉得我也并不后悔。其实大家也不要焦虑，很多人觉得说去德国待过，人就会呆掉了，就会不知变化。其实并不是这样，只是你会更多的学会坚持原则而已。对于职场来说，更重要的还是你的能力。只要你能力够强，后面的发展都不会特别差。

林钢

我选择回国创业是因为当时在德国公司工作的时候，已经做到公司合伙人了，所以对于整个的公司运作，商业逻辑理解得比较深刻。而且当时赶上了国内的十三五规划。我的专业方向在国内的发展落后于德国、日本、美国将近 30 年，人才梯队也是断档的。国家成立了重大科技专项，去攻关卡脖子的问题。我收到邀请，觉得合适就回去了。

林钢

我在德国这段期间，对举国研发的体制深有感触，包括工业体系的运转，和各级科研机构的协调，形成中小企业和大企业之间的联动机制。贡献国家大部分工业产值的中小企业，受益于德国政策扶植，成立产业研发联盟，无论是大小企业，都只有一票的投票权，确定研发重点，和承接课题的高校研究所。联盟在每个时间节点对科研成果进评审，最终的成果大家共享，实现大小企业的共同进步和发展。

林钢

所以大家求职不必盲目崇拜大公司。在德国很多中小企业真正掌握了细分领域的技术制高点，很多技术传承是放在小企业的，大企业是系统集成的，这个概念和国内略有区别。国内普遍是属于资源导向型的，但是大企业到一定规模后，创新机制和整个的转向速度都会出现一定的滞后。如果盲目地选择一个大而全的企业，你很可能在这个就职的过程中把你用成一个螺丝钉。

在德国职场，尤其是年轻的中国人在德国职场，最应该注意什么？

张虎臣

首先语言能力肯定是必须的。例如在宝马公司，主要的交流语言是德语，那么德语肯定是必须的。因为任何一个东西，最重要的是你能很快地理解同事之间在聊什么，毕竟多人会议的时候，没有人会多考虑你的感受，所以首先你的语言能力一定要好，才可以去快速理解他们。

张虎臣

其次中国人和德国人文化上也有不同。我待了这么多年，慢慢也知道怎么跟德国人相处了。跟德国人相处的话，基本上直来直去还是比较好的，有什么问题直接跟他们说，他们一般也会接受。而且中国学生总体来说还是内敛一点，不会像德国学生，即使只是一个实习生，在一个企业里面，他都是希望把自己的观点赶快抛出来，也希望得到别人能认同。那这一点我希望中国学生能够多向德国学生学习，要更多地、勇敢地表达自己和自己的观点。多表达了自己，你也可以借此去多思考，也可以多给别人留下更深的印象。中国学生都很聪明，也很刻苦努力，他们当时听不懂的可以回去看，然后很快也会明白的。但是在企业里面有的时候开会，尤其是大一些的会议，有的时候为了维护自己利益，需要很强的临场反应，那这对语言的要求就很高了。也可以看出，语言真的非常重要。

肖胜卿

一个就是透明化的沟通，不管是跟人打交道上，还是去做事情上都需要这品质。要非常真诚地去跟别人去沟通，对人要真诚。另一个是理解别人，包括是在工作中，如果你要跟别人合作一件事情，你要能多站在对方的角度去理解一下他的一些行为，就包括可能有时候没有达到你的预期。但是这个时候去理解他，去做一些正向的引导，我觉得这个特别的重要。还有一点是要非常勇于去表达，而且要多去表达自己的想法，不管是在讨论什么样的事情。我以前可能会觉得，我如果有一个想法，我会深思熟虑，然后我觉得我这个想法是可以的，我才会去就是把它表达出来。但是我在这边跟德国人打交道的过程中就发现，他们会非常勇敢的，想到什么就说什么，非常开诚布公，非常直接的交流。如果你也这么做，在这个过程，你不但能锻炼你的思维，而且还锻炼你的语言能力，然后还有一个就是让别人也更了解你。有的时候你的想法不说出来，对方就没有办法去理解你。而如果你去多说，多表达自己的想法，那么你们互相之间就能多了解，也能多学习。

话题 3：中德背景人才的机遇

作为中德两国背景的人才，在您所从事的领域有没有什么特别的机会?

赖臻

对汽车行业、电动化智能化，还有自动驾驶感兴趣的留德学生，现在是一个百年一遇的机会，去参与到这个行业的变革中来。中德教育背景的同学可以通过实习和工作，接触到德国这边在汽车工业这么多年积累的最先进的知识以及经验。现在越来越多的中国车企“出海”，有中德教育背景的人才进入这些企业会有更多的优势。我们的中文是最重要的优势之一，因为你可以跟你在中国的同事无缝衔接的沟通，你可以跟你在中国的高层做更好的汇报。因为即使我们大家都说英语，有的时候你也很难解释好你的情绪，用母语交流具有难以比拟的优势。如果你的德语能力也很强，就可以更好地去跟这边的合作伙伴、供应商，以及业内的其他朋友去做更好的交流。语言，我觉得永远都是，人类最重要的一个工具。

刘旸洋

对自动驾驶来说，（在德国的）企业在招聘时是不在乎你是中国人或者是德国人的，重要的是有没有这方面的背景和经历，你学习的专业和课程匹不匹配。而德国在软件工程、人工智能这个行业有比较大的人才缺口。相对于软件工程同学来说，我们车辆工程的学生要进入自动驾驶行业会更有难度，但我们对汽车的了解更全面，更容易掌握全局观。就比如说我现在做的系统架构，从光学到车身控制再到硬件都是需要我了解并参与设计和决策。所以我可能不会钻研到某个特定的细节上，但是需要有一个非常广的视野和全局观，这是我们就是传统汽车行业学生的一个优势。前提是在你学习的过程中，对这个行业已经有认知，通过论文或实习，对人工智能网络、深度学习有一定的了解和切实的编程经历，这会对进入这个行业比较有帮助。

张虎臣

汽车行业里许多中国公司正在崛起。其实不止这个，甚至整个中国的崛起，对于我们在德国的中国人来说，都是非常好的。因为不管你是在公司里面还是私下跟朋友之间，他们会越来越知道中国的东西，想要通过你去了解中国。这就会给你带来很多机会。

严骆锴

其实也是要具体情况具体分析。很多人听说你是留学回来的，就会想你有没有带回来一些先进的甚至壁垒性的技术。外来的和尚好念经嘛。如果你有这种技术，那么就可以帮你迅速打开局面，那就是非常有意义的。

在电改和电力交易这一块，其实德国背景并不能带来太多。15年前后，国家开始了电力体制改革，在这个改革中，本身就是有两种模式之争。一种是以德国为代表的欧洲模式，一种是美国模式。当然还有好多小流派。留德和留美在这上面是有一定的竞争的。在这一块，我们留德的人相对吃亏一点，可能在理念的输出和宣传方面没有留美的人做得那么好，一定程度上造成了美国模式强势的这一现状。

严骆锴

当然在目前国家提出“3060”双碳目标的背景下，其实能源行业里具有德国背景的人才目前还是有很多机会的，特别是在用户侧。比如虚拟电厂，或者负荷集成这一块，德国是做得很强的，可以给中国很多启示，那么就给了德国背景的人很多机会。

刘自源

在我做的这个领域，中国是有很大的机会的。我做的这个行业，可以理解成为人工智能（AI）和机器人的一个交叉学科，大约从 12 年开始，人工智能这个领域已经有翻天覆地的变化。首先深度学习成为了现在一种必备的工具。12 年的时候，大家都在用传统方法，在关注的领域里做着不同的尝试，然后包括机器人本身，它在硬件层面上是非常弱的，不论是你的计算主板、传感器还是执行器。但是到了今天，你会发现除了刚才说的这个智能算法、数据驱动类的、深度学习类的东西有了巨幅前进之外，机器人本身这个行业也是有翻天覆地的变化的，就是现在机器人已经进入了一个国产化的阶段，中国的这个市面上有非常多优秀的初创企业，你会看到他们的技术在无限的逼近世界的前几位。其实一旦到了这个阶段，我认为再过五到十年可能就会进入一个爆发期。因为以中国的这个工业水平，这些昂贵的硬件做到相对廉价，并且质量有保证，那么再经过五年到十年，当这个机器人的硬件水平在中国这个工业水平加持下大幅提升的话，我相信机器人整体作为一个产业，以及这个智能算法整个产业它的落地就会越来越广，尤其中国又是一个巨大的市场，我觉得再过几年应该会有一个爆发期。

话题 4：给留德学子的建议

您对留德学子有哪些建议？

蔡铿

我们出国的时候，冯晓院长给我们讲了一些话，我记得一句：少 sprechen，多 zuhören。就是去德国的时候特别注意一下，多听多看。还有就是不要带着偏见，德国其实有很深厚的哲学、技术等各方面的历史。德国人有很多独特的想法，要多去了解，多去倾听，不要急着下结论。另外一点，就是要珍惜出去的机会，特别是在这个国际形势下，多学习别人先进的东西，特别是内在的东西，而不是浮于表面的东西。比如蔡司，它的历史悠久，蔡司的创始人发现了光学里面的衍射极限，后来由一个科学家创立一个公司。那德国人为什么能够把一个科学家创业公司做到世界级，我们是不是能够学会一些新的东西？

林钢

要把德语学好，只有更好，没有最好。尽量接近母语水平，那是最好的。到德国后无论是求学，还是去企业工作，包括生活中语言毕竟是非常重要的沟通技能。否则任何事情的推进难度都会增大一些。另外一个呢，就是大家来了之后，真的要认真对待实习和论文，把握这些去企业的机会。因为这是一个非常好的双向窗口，首先是让学生在学习期间了解所学专业在顶尖企业里面意味着什么，同时也是一个非常好的窗口期，去展示你自己。只有你在这个窗口期，展示出优秀的学习能力、语言能力、沟通能力，企业才能充分了解你。

赖臻

从我在德国 10 年的经历来讲，最重要的建议就是一定要学好德语，即使你在专业功课的成绩上不能做到一点几。在我看来，语言是你在德国最关键的钥匙。其实我们选择了出国这条路，就要学会独立生活和承担，例如去跟外管局打交道，甚至小到要去寄一个快递，会有很多机会让你不得不开口。只要敢于开口，你的语言总归会变好。在德国的中国朋友很重要，但也要去跟德国人交流，都不一定要跟德国人做朋友，只要跟他说话就行。我有一个可能家长听了不太欢迎的一个建议，就是多参加一些派对，适量饮酒，喝了一点酒其实你本身的语言能力是没有变化的，但比较敢说了，其实犯点错误也没关系，语法错误都不是问题，让大家知道你想说什么，慢慢地，语言就变好了。

刘旸洋

德国的硕士相对于英美来说可能需要消耗的时间会久一点，但如果你真的想在某一个领域学得比较扎实的话，德国非常适合。它有非常系统的学习安排和计划，你还可以根据兴趣做一定的调整，论文的经历不仅非常有挑战，也能够让你学习得非常深入，让你确切知道，你对这一小块领域已经比较了解了。因此德国的学历其实在欧洲或者北美的一些院校和公司认可度是非常高的。留学费用相对来说比较低。语言方面，在这里你当然可以完全依靠英语，就生活的各个方面，包括学校的各个方面，进行交流。但是如果你想比较深入地进入德国社会，和同事同学有更进一步的沟通的话，德语当然是非常必要的。最后，德国的行业还是比较有特色的，比如说硬件，汽车行业和化学化工等，你可以结合你自己的方向看看德国在这个方向上面有哪些比较强势的公司或高校。毕竟德国的体量不如美国和中国这么大，没办法在所有行业上面覆盖的很全面。

刘自源

首先你自己本身的专业肯定要学好，这是一个基础的条件。另外一方面，我觉得大家还是能尽可能把语言学好，无论你是英语好也好，德语好也好，你至少要有一门语言能做到比较精通，因为你进入后面的工作，还是要与人交流，你会发现你的交流能力，与人的沟通能力，以及很多很多的软技能其实也是不可或缺的。

肖胜卿

最重要的一点是德语要练好。这个是你在德国不管是生活、学习还是找工作，在我看来最重要的一个能力。比如找工作，其实第一面面的是什么？就是德语水平和对你这个人的印象。然后还是得好好学习，至少在博世，因为我们现在也在招实习生或者是正式工，我看着我同事去筛人、去面试，他们都是把人家的成绩单拉出来，一个一个看的。至少在博世这种大公司，可能也是因为选择多，它非常在意你的绩点，而且可能不是总绩点，可能是每一门的绩点，特别是跟他专业相关的课程，所以好好学习是必须的。

肖胜卿

其次，来德国了之后，多去参加各种各样的活动，走出自己的舒适圈，去认识新的人，然后跟不同的人有不同的交流。我觉得，重要的是在念书的同时，好好享受生活，大一到大三好好享受国内的校园生活，多锻炼，保持身体健康。然后就是提早对自己有个规划，念书的时候就多了解一些行业的信息。多追踪一下现在的热点行业，然后去调整自己的学习方向。

严骆锴

首先就是学好德语，我觉得这个可能值得说三遍。（对于中德工程学院这种到了德国就要马上学习专业课的学生来说，）不要总是想着到了德国之后再在德国的环境里学德语，其实系统的学习德语的这段时光，就是在去德国之前的这段时光。一旦德语基础没打好，后面学习以德语授课的这些课程会比较吃力，那么这个其实是个恶性循环。自己德语不好，本身要学的课程就会非常吃力，那就更加没有时间去学习德语，没有时间去跟德国人交流来提升德语。然后就是到了德国之后，一定要去多说德语，不要怕犯错。可能刚到德国的时候，你有一种初生牛犊不怕虎的这种精神状态，可能大家也会更包容你的德语，愿意去跟你交流。对于大家来说，语言能力不是一个决定因素，但是它其实真的会影响到你获取信息的速度，或者说学习知识的效率，那这个真的是会有非常大的影响。

严骆锴

在语言能力之外，我倒是觉得也要多参加一些活动，留意一些机会。很多时候转变都是在不经意间发生的，比如说你去参加一个报告会，或者说去参加一个论坛，可能一下子无意间就决定了你之后的职场方向。我个人也是通过一些协会和活动，走上了现在的职业的道路。

张虎臣

首先，学好德语肯定是一个。在国内要好好学德语，到了德国，要去了解德国社会，更多地去跟德国人交流。中国圈子很重要，但是也不能局限于自己的中国圈子，应该尽量去交一些德国朋友，去了解德国的文化，然后去提高德语的能力。

张虎臣

其次的话就是注重企业里的实习和论文。当然大家（中德工程学院学生）大四来了德国，学校都会要求进行实习和论文，那么最好是去一个真正的德国企业。如果学弟学妹对自己未来应该学什么、从事什么，有点迷茫，可以考虑一下 IT 领域。IT 其实是个非常有前景的领域。码农或者说会编程的人，在德国以及更广阔的业界的需求十分旺盛，德国的话尤其缺这方面人才。因为大多数德国人他们都不太愿意去学 IT。虽然说德国机械行业这些年已经越来越不吃香了，但是你去问德国人，很多人的第一选择仍然是学机械。例如德国的整车厂，宝马、奔驰、奥迪，对于这种比较传统的学机械或者是学汽车的人才的需求萎缩得很快，反而是跟 IT 相关的人才非常紧缺。

话题 5：对中德教育的看法

根据自身经历，聊一聊德国教育的特点及中德教育的区别

赖臻

德国的教育是比较鼓励学生独立的，你自己得想明白要学什么以及要达到什么样的目标。大家都是在独立的想自己要做的事，自己判断自己的未来。

有的同学选某些课纯粹是为了拿学分，那只考 4.0 也没有关系，老师们只负责传授知识，不会去看你学得怎么样；有的同学可能学到一半就不学了；有的同学他可能一边要打工养活自己一边学。学弟学妹要想明白自己要什么，这是一个很重要的思考过程，不要盲目地听别人说哪样好，我就要照那样去做。最重要的就是一定要多思考自己为什么这么做，犯错误不可怕，要多思考、多总结、多归纳，从而更好地改善自己。

刘旸洋

德国的教学比较严肃，标准相对较高。来到德国以后思想上一个根本的转变就是："从今天开始，所有的一切都得靠自己了。"

自己在国内上学的时候总觉得，再怎么样家里还是有依靠的，这种思想上的转变，会让人变得更加独立，独立一方面对自己是一个很好的激励，另一方面也会给你孤独感。但这种改变就让你觉得自己是独立的个体了，你要对自己负责，然后你就会开始更加积极向上，因为压力需要自己去消化，目标需要靠自己来实现。

刘自源

德国的教育，从小孩阶段到青少年到高中，教育更强调一种自主性，需要学生具有"自驱力"。

不像国内的教育鼓励大家都成为精英，高考千军万马过独木桥。德国并不期待所有人都成为精英，高考相对中国的高考也轻松很多，但那些自主意识很强的人，想成为学习领域里的佼佼者，从小按照自己的兴趣爱好在不断地发展自己，再迎接下一个挑战。他们到最后的高度是可以做得非常高的，进入工作之后，爆发力也是非常强。具有内驱力，即自主行动力的人更适合这种模式。

肖胜卿

德国教育更鼓励学生自主思考，对学生的创新和动手能力要求更高。学生对于学制的自主性和自由空间大得多。

在德国的同学，我这学期不想修这个，我这学期想轻松一点都可以。这边的学生毕业时间就没有国内有效率，每个人都有自己的选择。另外德国学生念中学的时候，会有一个学期或者一年，去国外念书，有很多机会出去交换，各国之间互相交流。

张虎臣

德国这边的学生，第一不追求精英大学，第二不追求特别高的成绩。

我当时在找硕士论文、找实习的时候发现，即使成绩好，如果没有太多实践经验，再加上语言如果还有点欠缺的时候，在德国找到实习和论文的机会就很难。

德国学生上学利用时间的关键是做实习论文，真正到工作当中学习和实践。要在工作的快节奏中，明白别人讨论的东西，并且能很快参与进别人的讨论。还要学习怎么跟别人合作完成一个项目，如何在团队当中起到一定的领导作用。这些都是读死书不太容易学到的。

蔡铠

我个人觉得体会最深的是，读博期间导师和学生之间的友谊。

良好的师生关系不是私人关系，而是基于学术的传承，“我是他的弟子，然后我也很珍惜教授和学院的名誉”。做学问做技术是需要有名誉的，在德国以至于在欧洲，类似于从前的骑士精神，这种贵族精神给我感受很深。这种学术上的传承，国内可能还需要很长时间才会积攒下来。

林钢

高校的研发大多是由来自工业界的教授、工程师，带来工业实践中真实的产品提炼出的实际工程问题。

德国人做实验特别喜欢做 1:1 的真实实验。他不喜欢做一些机理性的模块，他喜欢就拿着工程问题去做实验，可以很好地还原，做出来的价值会直接应用到工业里面。不仅仅是理论分析，还要把实验做得扎实，然后实验要贴近真实的工程实际，这一块对我的影响到现在都还比较深。

Interviews on Alumni

Alumni can provide invaluable experience. In this edition of the alumni development report, we have interviewed eight alumni of the CDHAW (Die Chinesisch-Deutsche Hochschule für Angewandte Wissenschaften). The eight excellent alumni come from different fields and have different backgrounds. The interviewer had an in-depth dialogue with the eight alumni in terms of doctoral studies, experience of staying in Germany, the working environment in China and Germany, university education in China and Germany, chances in the job market of Germany and China, etc. At the same time, the eight alumni also gave a lot of valuable advice to young Chinese who are in Germany or want to come to Germany.

The 8 guests all graduated from CDHAW of Tongji University and covered all four majors of CDHAW. They are currently working in AI, automotive, energy, and semiconductor industries in China and Germany. They are:

Dr. Ziyuan Liu: majored in Mechatronics Engineering in class 2004, is now the Director of Robotics Technology R&D in Huawei Research Institute in Munich. He received his master's degree in Telecommunication Engineering from the Technical University of Munich, and then studied robotics at Siemens, where he received his PhD. After graduation of his PhD journey, he started his own startup for one year, then joined Siemens as an R&D scientist, and joined DAMO Academy of Alibaba at the end of 2008 to work on robotics-related technology development and product design.

Dr. Huchen Zhang: majored in automotive service engineering in class 2004, master graduated from RWTH Aachen University, Germany with a master's degree in automotive engineering, and completed his doctoral degree through the joint program of BMW and RWTH Aachen University. He has worked as a project manager for BMW's vehicle R&D configuration and software development, and is now the project manager for BMW's vehicle cost control projects.

Dr. Gang Lin: majored in Building Technology and Intelligence in class 2005, last year of the bachelor program he had an exchange study in Munich. Master graduated from RWTH Aachen University, majored in Energy Technology. After graduation, he was engaged in gas turbine research, and returned to China in 2015 and started his own company Marvel-Tech in Shanghai.

Dr. Mang Cai: majored in Mechatronics Engineering in class 2005, last year of the bachelor program he had an exchange study at Hochschule Esslingen. He studied at TU Braunschweig for his master and Ph.D. After returning to China, he joined Huawei's 2012 lab and is currently working at Huawei HiSilicon.

LuoKai Yan: majored in Building Technology and Intelligence in class 2008, master's degree in energy-saving and sustainable building from the Technical University of Munich, and now on-job doctorate of energy and power engineering from Zhejiang University. Also, he is the director of Digital Energy Department of Digital Energy Centre of Jiangsu Trina Intelligent Distributed Energy Co. He is mainly engaged in top-level design, consulting and information platform development in the fields of energy internet, integrated energy, power trading and low-carbon sustainable development. He has rich experience in low carbon energy operation and sustainable energy development.

Yangyang Liu: majored in automotive service engineering in class 2009, now team leader of Cluster System Architect of Bosch, previous Architecture Engineer for Bosch's self-driving vision system. During the last year of the bachelor program he had an exchange study at Hochschule Esslingen and completed an internship and thesis at ZF. Afterwards, he pursued a master's degree in Vehicle Engineering at the University of Stuttgart, during which he switched to the direction of autonomous driving. After graduation, he worked at ZF and Bosch in the autonomous driving department.

Dr. Shengqing Xiao: majored in Building Technology and Intelligence in class 2010, now working at Bosch Termotechnik as System- and Requirements Engineer. She studied at Hochschule Zwickau as an exchange student in her last year of CDHAW bachelor program and did her master at the University of Dresden in the field of Energy Technology. She got her PhD degree from Chemnitz University of Technology.

Zhen Lai: Majored in Business Engineering in class 2011, Head of Operational Purchasing @NIO Europe. He studied at BHT Berlin in the last year of his CDHAW bachelor. In 2015, he started his master program of business management at the Technical University of Munich (TUM), during which he completed his internship and thesis at Infineon, Nio Capital and Porsche Consulting. After graduation, he joined Nio’s European procurement team.

Topic1: Experiences and Thoughts on the Path to Pursuing a Ph.D.

Why did you choose to pursue a Ph.D.?

Dr. Ziyuan Liu

The opportunity to pursue a Ph.D. arose during my time as a working student at Siemens, and it happened by a stroke of luck. I was performing well in my work, and another team was interested. Through internal referrals, I ended up continuing my Ph.D. at Siemens, focusing on robotics and affiliated with the Chair of Communications Engineering of the Technical University of Munich.

Dr. Shengqing Xiao

My decision to pursue a Master's degree followed an unfulfilling bachelor exchange year in Germany. I felt I hadn't gained enough knowledge during my studies, and I believed I needed to continue my education. I applied for Master's programs in Germany and received acceptances from the Technical University of Dresden and RWTH Aachen. After comparing the programs, I chose Dresden, focusing on my area of interest.

After graduating from Dresden, I began job hunting. At that time, several companies offered promising opportunities, and I initially had no intention of pursuing a Ph.D. I was particularly interested in a project recommended by my thesis supervisor, which involved carbon-neutral heating transformations in residential areas. Looking back, this project was visionary, as it was around 2017, and the concept of carbon neutrality had yet to gain widespread attention in China. Germany was discussing energy transition, but the emphasis was not as strong.

The project was enticing; it was a federal initiative with substantial collaboration between my former professors, the Zwickau city government, and a university in Munich. After I joined, our senior professor often emphasized that working in a university without pursuing a Ph.D. would be a missed opportunity. Over time, his words convinced me, and I decided to pursue a Ph.D. The idea initially stemmed from curiosity and evolved as I realized the potential for personal and professional growth.

What Is Most Important During the Ph.D. Journey?

Dr. Mang Cai

In my opinion, maintaining curiosity and an eagerness for knowledge while remaining open to new experiences is crucial during a Ph.D. journey. When I was working on Light Detection and Ranging (Lidar), there were only a few dozen people worldwide, including China, working on it. I found this fascinating. In 2018, during my research at Huawei on automotive topics, the electrical research team consisted of only five or six people, making us pioneers. When I proposed the topic "Wickelungs-theorie" for my Ph.D. thesis in Braunschweig, my advisor mentioned that it was a niche topic that no one had explored for five to six decades. There were perhaps only five or six people worldwide working on it. Yet, I chose this topic.

Discovering small joys in learning and continuously striving for improvement is my personal character. China is currently undergoing significant technological advancements, and there are numerous opportunities for exploration and innovation, especially for those willing to try new things. Maintaining curiosity and a willingness to explore can provide a significant advantage.

Dr. Ziyuan Liu

The most crucial aspect of a Ph.D. journey, in my view, is the ability to self-learn. Once you enter university, professors can only provide fundamental knowledge. As you progress through graduate and Ph.D. programs and delve deeper into a specific field or topic, professors may not always guide you on what to do. Therefore, developing strong self-learning skills is essential. If you have a deep interest in something, keep digging deeper, learn relevant knowledge, transform what you see and hear into your own thoughts, and make judgments. This ability is vital. Waiting for others to tell you what to do or how to do it is not sufficient.

What Choices Follow After Completing a Ph.D.?

Dr. Ziyuan Liu

After graduating with my Ph.D. in 2014, I entered the field of robotics, focusing on computer vision. At that time, I ventured into entrepreneurship with the idea of creating a digital platform for photo digitization. The mobile app allowed users to scan photos, creating digital images for sharing with family and friends. Although the startup was not ultimately successful, I learned valuable lessons about project management and product design.

Dr. Shengqing Xiao

Regarding post-Ph.D. choices, I lean towards the industry world due to personal preference. Staying in academia would require continuously publishing papers. After achieving results, you must summarize and present them in various journal formats, following their specific requirements. I personally don't enjoy this process. In the corporate world, you are closer to the market, large companies have sufficient budgets, and they have their own laboratories for testing and data collection. I chose to seek employment and joined Bosch Thermotechnik in March 2022, starting as a management trainee in the research and development department. I recommend pursuing a Ph.D., but whether to stay in academia or to switch to industry depends on individual preferences and whether the role aligns with your interests. It's essential to assess if you can find a sense of accomplishment, whether you can contribute to your own development, and if you can continue learning.

Differences Between Pursuing a Ph.D. at a German University and in the industry?

Dr. Huchen Zhang

Pursuing a Ph.D. in a German university and in an industry can differ significantly. University Ph.D. programs in Germany are typically longer, lasting around five years for institutions like RWTH Aachen or the Technical University of Munich. The initial two years are often spent on project work, and it's only after this period that students choose specific Ph.D. topics. The subsequent three years mainly revolve around in-depth research on the chosen subject.

On the other hand, most corporate Ph.D. programs in Germany last for three years. Upon entering a company, you are assigned a specific project with allocated funding. Ph.D. candidates often act as project managers, conducting research while contributing to the company's objectives. Additionally, corporate Ph.D. programs do not confer Ph.D. titles; candidates must collaborate with a university professor to supervise their research and ultimately receive the Ph.D. title. Hence, compared to university-based Ph.D. programs, corporate Ph.D. candidates face a triad of pressures: research, practicality, and time constraints.

Topic 2: Working Experiences in Germany and China

What are the similarities and differences you've experienced in the working environment in German and in China?

Dr. Ziyuan Liu

I think both approaches have their advantages and disadvantages. If a task is something with a high level of certainty, then China's approach may be more efficient, with less discussion. Everyone sets the plan and follows a strict KPI evaluation system. In situations with clear goals and expected results, this work style is the most efficient. But if you're doing something more research-oriented, you might need to consider whether working under a more open, broad, and discussion-based approach would be better. This mainly depends on your goals because sometimes, in research, the objectives are constantly changing. How do you adapt to such changes? China's approach is more focused; I set a goal, and I keep working towards it. In contrast, the Western approach is more open, allowing for discussions and pursuing open-ended goals.

Zhen Lai

Most of my career experiences have been in a Chinese company in Germany: NIO, which is quite an international environment with colleagues from over 30 nationalities. From my personal experience, I don't see significant differences between the Chinese and German workplaces. It's all about people working together, and there will always be clashes and adjustments. Whether the work pressure is high or not depends on the individual, as pressure often comes from superiors. If your boss entrusts you with these pressures, it's also a sign of recognition because they trust you with important tasks. So, I believe pressure can have two sides. Personally, I enjoy a high-pressure environment where I wake up every day thinking about what I need to do. I set goals for the day, the week, and even further ahead. So, I personally enjoy it, but others might not like such a high-pressure environment, and they naturally choose differently. It's a matter of personal choice.

How do you view your experiences in Germany helping your career development in China?

LuoKai Yan

To be honest, the influence of my study in Germany on my career in China may not be significant. Even if I hadn't come to Germany, I might have experienced similar growth and progress in my career. As an overseas returnee, having an good international background can serve as a stepping stone in certain industries. However, this is merely a stepping stone.

In your subsequent career, your true capabilities, interpersonal skills, and, to a large extent, even luck play a more significant role. My time in Germany might have made me more rigorous and possibly even more rigid. Whether this change is good or bad is challenging to determine, as it depends on the specific circumstances. Nevertheless, I have no regrets.

Some people think that if you spend time in Germany, you'll become rigid and resistant to change. But that's not the case. It's just that you'll learn to adhere to your principles more. Ultimately, career development relies on your true abilities. As long as you are competent, your career will not really be hindered.

Dr. Gang Lin

I returned to China to start my own business because, during my time working at a German company, I had reached the position of a company partner. This experience gave me a deep understanding of how businesses operate and the logic behind them. Additionally, it coincided with China's 13th Five-Year Plan tackling critical challenges, and I received an invitation and felt it was appropriate, so I decided to return.

During my time in Germany, I gained a deep appreciation for the country's nationwide research and development system. This included how the industrial system functioned and how various levels of research coordinated with one another. Germany's mechanism for collaboration between small and medium-sized enterprises (SMEs) and large corporations particularly intrigued me. SMEs, which contribute significantly to the country's industrial output, received government support. They formed research and development alliances and worked with universities to achieve common goals. In these alliances, every company, regardless of size, had equal voting rights. They collectively determined research priorities, and university research institutes undertook specific projects.

Dr. Gang Lin

At each stage of development, the results were subject to evaluation. In the end, all members shared the outcomes, fostering progress and development among both large and small enterprises. This model taught me that large corporations aren't always the best option. Many SMEs excel in niche areas and hold the key to specialized technologies. In many cases, they drive innovation, while larger corporations focus on system integration. This concept contrasts with China's approach, which often revolves around resource allocation. However, once a large corporation reaches a certain size, it may experience delays in innovation and adaptability. So, don't blindly aspire to work for a big company; many smaller enterprises hold the keys to specialized technology and innovation.

How do you view your experiences in Germany helping your career development in China?

Dr. Huchen Zhang

First and foremost, language is essential. In Germany, especially in companies like BMW, the primary communication language is German. Being proficient in German is a necessity because in group meetings, people may not consider your feelings. You need to quickly comprehend their discussions.

Furthermore, there are cultural differences between Chinese and Germans. After spending so many years in Germany, I gradually learned how to interact with Germans. When dealing with Germans, it's generally better to be direct. If you have an issue, express it directly, and they will typically accept it. Moreover, Chinese students tend to be more reserved. They may not be as proactive as German students, who, even as interns in a company, are eager to present their ideas and seek recognition. This is something I hope Chinese students can learn from their German counterparts – to be more courageous in expressing themselves and their opinions. By expressing yourself more, you can also engage in deeper thinking and leave a stronger impression on others.

Chinese students are quick learners and hardworking. If there's something they don't understand initially, they can go back and study it until they grasp it. However, in the industry world, especially in larger meetings, there are times when strong on-the-spot reactions are required, particularly for the sake of one's interests. This places high demands on language skills. It's clear that language is indeed crucial.

Dr. Shengqing Xiao

One thing is transparent communication, whether in dealing with people or in doing tasks. This quality is essential. You should communicate with others very sincerely and be genuine in your interactions. Another important aspect is understanding others, including in your work. If you are working with someone on a project, you should try to see things from their perspective, even when their actions may not meet your expectations. At such times, it's crucial to try to understand them and provide positive guidance.

Furthermore, you should be very courageous in expressing yourself and your ideas, regardless of the topic of discussion. In the past, you might have thought that you should carefully consider your ideas and only express them if you were confident they were right. However, in my interactions with Germans, I've found that they are very brave. They say what's on their minds, communicate openly, and are very direct. If you adopt a similar approach, you can not only sharpen your thinking and language skills but also help others understand you better. Sometimes, if you don't express your ideas, the other person won't be able to understand you. But if you express yourself more and share your thoughts, it allows for better mutual understanding and learning between you and others.

Topic 3: Chances for the People with both Chinese and German backgrounds

Specific in your field, are there any special opportunities for people with both Chinese and German backgrounds?

Zhen Lai

It is a once-in-a-century opportunity for students with German educational background, who are interested in the automotive industry, electrification and artificial intelligence, as well as autonomous driving, to participate in the transformation of the industry. Through internships and jobs, students with Chinese and German educational backgrounds can get in touch with the most advanced knowledge and experience in the automotive industry, which has already been accumulated in Germany for so many years. Nowadays, more and more Chinese automobile companies are going overseas. Talented students will have more advantages to join these companies. Our Chinese language is one of the most important advantages, because you can communicate seamlessly with your colleagues in China, and you can report better to your executives in China. Because even if we all speak English, sometimes it's hard to explain your emotions. Communicating in your mother tongue is a unique advantage beyond imaginations. If you are good in German, you can communicate better with partners, suppliers and other people in the industry. Language is always the most important tool for human beings.

Yangyang Liu

For automated driving, German companies don't care if you are Chinese or German during hiring. Which matters is whether you have experience in this field, and whether your major and course of study match. In Germany, there is a relatively large need in talented students in the software engineering and artificial intelligence industries. Compared to software engineering students, it is more difficult for us (vehicle engineering students) to enter the automated driving industry. But we have a more comprehensive understanding of the automobile, it is easier to grasp the overall view.

Take the system architecture for example, which I'm currently working on. From optics to body control to hardware is something I need to understand and consider in the design and decision making. So I may not be drilling down to a specific detail, but I need to have a very broad view, which is one of the advantages of being a traditional vehicle engineering student. The prerequisite is that during your studies, you already have knowledge of the industry. Through your thesis or internship, you have some understanding of AI networks, deep learning and tangible programming experience, which will be more helpful to enter the industry.

Dr. Huchen Zhang

Many Chinese companies in the automotive industry are on the rise. In fact, the rise of China, not only in the automotive industry is wonderful for us Chinese students in Germany. Because whether you are in the company or privately with your friends, they will know more and more about China and want to know China through you. This will bring you a lot of opportunities.

LuoKai Yan

Actually, it's also a case-by-case analysis. Many people hear that you come back from overseas, they will want to know whether you have brought back something advanced in the field, even to cross certain barriers. As the old saying goes, foreign monks are better at the scriptures. If you have this kind of technology, then it can help you quickly open up the situation, which is meaningful to your carrier.

In the electricity reform and power trading field, in fact, the German background doesn't mean too much. Since 2015, the beginning of the reform of the Chinese electricity system, there are two lines of contention. One is the European model, represented by Germany, and the other is the American model. Of course, there are many other small models. There is a certain amount of competition between Germany and the United States. In this piece, who studied in Germany relatively suffer a little bit, doing not as well as export and publicity from United States. Now the American models are in the top therefore.

Of course, in the context of the current national "3060" dual-carbon goals, in fact, the energy industry provides a lot of opportunities for talented students with German background, especially on the user side. For example, the virtual power plant, or load integration field, Germany is doing very strong. That can give China a lot of inspiration, that's the opportunities for talented students with German background.

Dr. Ziyuan Liu

In my field, there are great opportunities in China. My field can be understood as a cross-discipline of AI and robotics. From the perspective of the past decade, that is to say, from 12 years onwards, the field of AI has been an overall changing. First of all, deep learning has become a must-have tool now. 12 years ago, everyone was using traditional methods, doing different attempts in the areas of concern, and then including the robot itself, which is very weak at the hardware level, whether it's your computational motherboard, sensors or actuators. But today, you will find that in addition to this intelligent algorithms, data-driven type, deep learning type of things that I just mentioned have made huge advances, the industry of robotics itself has also changed drastically. Robots have now entered a stage of localization, and there are a lot of excellent startups in this market in China, and you'll see that their technology is infinitely closing in on the world's top few.

Dr. Ziyuan Liu

In fact, once we reach this stage, I think another five to ten years may bring us an explosive period. Because with this level of industry in China, these expensive hardwares become relatively cheap, and the quality is to be guaranteed. Then after five to ten years, when the robot hardware level in China's industrial level under the support of a substantial increase in the words, I believe that the robot as a whole as an industry, as well as the intelligent algorithm of the entire industry will be more and more extensive landing. Especially in China, the huge market will see a huge outbreak.

Topic 4: Advices to the Chinese Students in Germany

Do you have any advice to the Chinese students in Germany?

Dr. Mang Cai

When we went abroad, Dean Prof. Feng gave us some words, I remember one: less sprechen, more zuhören. So, you have to pay special attention when you go to Germany, listen more and see more. And don't be prejudiced, Germany actually has a very deep history of philosophy, technology and other aspects. Germans have a lot of unique ideas. We should learn more, listen more, do not rush to conclusions.

Another point is to cherish the opportunity to go out, especially in this globalized world, and learn more about other people's advanced things, especially the inner things, rather than the superficial things. For example, Zeiss has a long history. The founder of Zeiss discovered the diffraction limit in optics, and later a scientist founded the company. So how come the Germans were able to make a scientist-start-up-company world-class, are we able to learn something new from it?

Dr. Gang Lin

Learn German well, there is only better, there is no best. We should speak German as close as possible to the level of mother tongue. After coming to Germany, whether you are studying or working in a company, also in the daily life, language is a very important communication skill. Otherwise, it will be more difficult to advance in any matter. Another thing is that after you come to Germany, you should take internships and thesis seriously, and grasp these opportunities to go to companies. Because this is a very good method to learn. First of all, it's for students to understand what their majors mean in the top companies during their study, and it's also a very good stage to show yourself. Only when you show your excellent learning ability, language ability and communication ability during this period, can enterprises fully know you and trust you.

Zhen Lai

From my experience of 10 years in Germany, the most important advice is to learn German well. Even if you can't achieve a score of 1.x in your study, language is still more important. In my opinion language is the most crucial key for you in Germany. In fact, if we choose to go abroad, we have to learn to live independently and undertake, for example, to deal with the foreign affairs bureau, even as small as to send a post, there will be a lot of opportunities for you to push yourself to open your mouth. As long as you dare to talk, your language will be better. Chinese friends in Germany are very important, but you also have to talk to Germans, you don't even have to be friends with a German, just talk to him. I have a tip, maybe the parents don't like, is to participate in more parties, and drinking alcohol (moderately of course) with Germans on those parties. Drinking a little alcohol in fact, your German skills will not be damaged, but your dare to say more. Actually, make some mistakes is okay, grammatical errors are not a problem, let everyone know what you want to say, and the language will become better.

Yangyang Liu

A master's degree in Germany may take a little bit longer than in the UK or the US, but if you really want to be more solid in a certain field, Germany is perfect for that. It has a very systematic study schedule and program, and you can make adjustment according to your interests. The dissertation experience is not only very challenging, but it also allows you to learn very solidly, so that you know exactly what you know about this small area. Therefore, German degrees are actually very well recognized by some institutions and companies in Europe or North America. The cost of studying abroad is relatively low. Language-wise, you can of course rely entirely on English here, in all aspects of life, including all aspects of school. However, if you want to enter German society more deeply and communicate with your colleagues and classmates, German is of course very necessary. Finally, Germany's industry is still relatively unique, such as hardware, automotive industry and chemical industry, etc. You probably have to combine your own interests and the strong companies or colleges in this area in Germany, since, Germany is not as big as the US or China, it cannot cover all industries comprehensively.

Dr. Ziyuan Liu

First of all, you must learn your own major well, which is a basic condition. On the other hand, I think we can still learn the language as well as possible, no matter whether you are good at English or German. You must have at least one language to be more proficient, because when you start to work, or to communicate with people, you will find that your ability to communicate, as well as a lot of soft skills is actually indispensable.

Dr. Shengqing Xiao

The most important thing is to be good at German(language). This is the most important ability for you to live, study and find a job in Germany. For example, if you are looking for a job, what is the first thing you will be interviewed? It's the level of German and the impression of you as a person.

And at Bosch, we are now recruiting interns or regular employees, and I have watched my colleagues go through the screening process and interviews, and they pull out people's transcripts and look at them one by one. At least in a big company like Bosch, probably because of the many choices, it cares a lot about your GPA, and it may not be the total GPA, it may be the GPA of each course, especially the courses related to your major, so studying hard is a must.

Dr. Shengqing Xiao

Secondly, after coming to Germany, you should participate in various activities, go out of your comfort zone, meet new people, and have different communication with different people. I think it is also very important to enjoy life while studying. Including enjoying the campus life in China from the first to the third year of CDHAW, exercising more and keeping healthy. Then you should have a plan for yourself early, and start to learn more practical stuff about the industry when you are still studying. And track the hot industries and adjust your study direction based on that.

LuoKai Yan

The first thing is to learn German well, I think this may be worth saying three times. (For the students of CDHAW who have to study professional courses immediately after arriving in Germany) Don't always think of learning German in German environment after arriving in Germany, in fact, the only time that you could learn German systematically, is the time before going to Germany. If you don't have a good foundation in German, you will have a hard time in the courses you want to study, and then you will have no time to learn German and communicate with Germans to improve your German, which will lead to a vicious circle. Then when you arrive in Germany, make sure you go and speak more German and don't be afraid to make mistakes. When you first arrive in Germany, just be brave, and people may be more tolerant of your German and willing to communicate with you. For everyone, language ability is not a decisive factor, but it really affects the speed of acquiring information, or the efficiency of learning knowledge, and that really has a very big impact.

In addition to language skills, I think it's also important to participate in more activities and keep an eye out for opportunities. Often, changes happen inadvertently. For example, if you go to a presentation or a forum, you may unintentionally decide the direction of your career after that. Personally, I've been able to get into my current career path through a number of associations and activities.

Dr. Huchen Zhan

First of all, learning German well is definitely one. You have to learn German well in China already, and when you come to Germany, you have to understand German society and communicate with Germans more. Chinese circle is very important, but you should not limit yourself to your own Chinese circle. You should try to make some German friends, to understand German culture, and then improve your German language skills.

Dr. Huchen Zhang

The second thing is to focus on the internship and thesis in the company. Of course, when you come to Germany in your last bachelor year, you will be required to do internship and thesis to be able to graduate. And it is better to go to a real German company. If you are a little bit confused about what you should study or do in the future, you can consider the IT field, which is a very promising field. Coders, or people who know how to program, are in high demand in Germany, as well as in the wider industry, and there is a particular shortage of them in Germany. Most Germans are reluctant to study IT, and although the mechanical industry in Germany has become more and more unpopular over the years, if you ask the Germans, the first choice of many of them is still to study mechanics. For example, the German car manufacturers, BMW, Mercedes-Benz, Audi, the demand of them for talents in machinery or automotive, shrinking very quickly. On the contrary, IT-related talents are in short supply.

Topic 5: Views on the Education Systems in China and Germany

What are the characteristics of higher education in Germany compared to the Chinese system?

Zhen Lai

Everyone is encouraged to think independently about their own pursuits and make decisions about their future. In Germany, some students may decide to discontinue their studies, while others might work part-time jobs to support themselves while pursuing their education. It's essential for younger students to engage in thoughtful self-reflection to understand their own goals and motivations. Blindly following others' advice without considering one's own aspirations is discouraged. The most crucial aspect is to continually reflect on why you are doing. Making mistakes is not a problem; the key is to sum up, analyze, and use those experiences for self-improvement.

Yangyang Liu

In Germany, the education system is indeed quite serious, from attending classes to writing papers and participating in internships. Upon arriving in Germany, many individuals experience a fundamental shift in their mindset. While studying in China, one may often have the perception that there is still a safety net supported by family. However, in Germany, it becomes very apparent that everything depends on one's own efforts. This profound change fosters a sense of independence. Independence can be a source of positive motivation, but it can also lead to feelings of loneliness. Nevertheless, this transformation makes individuals feel more self-reliant and responsible. You become accountable for yourself, and it encourages a more proactive and resilient approach because you have to manage and cope with the pressures independently while striving to achieve your goals.

Dr. Ziyuan Liu

In Germany, the education system encourages a sense of autonomy from childhood through adolescence and high school. It doesn't expect everyone to become an elite achiever, and their high school exams, in comparison to China's National College Entrance Examination, are generally less stressful. However, you'll notice that individuals with a strong sense of self-motivation and a desire to excel in their chosen field from a young age tend to perform exceptionally well. They continuously develop themselves based on their interests and passions, pushing themselves towards the next challenge. Such individuals often demonstrate remarkable performance when they enter the workforce. Those individuals who are naturally more self-disciplined and thrive in structured environments will do better in this system.

Dr. Shengqing Xiao

German education encourages students to think on their own and demands more creativity and hands-on skills. They don't have the same rigid academic schedule as in some other countries. Students have a greater degree of autonomy and flexibility. In Germany, students can choose when to take certain courses and may even take breaks if they wish. As a result, graduation times may vary among students, and each person has the freedom to make their own choices. Additionally, in Germany, during high school, there is often an opportunity for students to spend a semester or a year studying abroad. This exchange model is indeed an excellent way to promote international exchange and understanding among countries.

Dr. Huchen Zhang

Students in Germany do not pursue elite universities and do not pursue particularly high grades. When I was looking for my master's thesis and internship, I found that even if my grades were good, if I didn't have too much practical experience, and if I was not fluent in German, it would be very difficult to find internships and thesis opportunities in Germany. The key to utilizing time for German students is to internship and thesis, as actually learning by practicing. It is important to understand what others are discussing and to be able to quickly participate in their discussions in a fast-paced work environment. You also need to learn how to work with others to complete a project and how to play a leadership role in a team. These are things that are not easily learned by reading books.

Dr. Mang Cai

Personally, I feel that the most profound experience is the friendship between the mentor and the student during the PhD program. A good teacher-student relationship is not personal, but based on academic heritage, "I am his student, so I cherish the reputation of my professor and my college". The reputation is important for academics or technology field, in Germany and even in Europe. Similar to the former chivalry, this aristocratic spirit gives me a deep feeling. This kind of academic heritage may take a long time to accumulate in China.

Dr. Gang Lin

Most of the R&D in universities is done by professors and engineers from industry, who bring real products in industrial practice to distill the actual engineering problems.
Germans especially like to do 1:1 real experiment. They do not like to do some mechanical rationality of the module, but to take the engineering problem to do experiments, which can be very good to restore. And the result will be directly applied to industrial field. Not only theoretical analysis, but also solid experiments should be close to the real engineering reality. This piece of influence on me are still relatively deep until now.