



2018 년 한국연소학회 대학원생 교육 프로그램

“Flames and Experiments” (한국어 강의)

차민석 교수

KAUST (King Abdullah University of Science and Technology)

Instruction of experimental approaches to study flames and combustion is a main focus of this course. This course is designed for students conducting experiments to facilitate practical realizations of their experiments in knowledge and design base. However, because this course is also designed to teach fundamental aspects of premixed and nonpremixed flames via experimental parametric studies, it would be greatly helpful for students performing numerical simulations by filling a gap between their codes and real flames of their interests. Diagnostic methods for minor species, flow field, and temperature are also instructed. Intended subject areas are as follows:

- Widely used canonical systems: coflow burner, counterflow burner, constant volume combustion chamber, flat flame burner
 - Laminar premixed flames
 - Laminar nonpremixed flames
 - Jet flames
 - Edge flames
- Diagnostic methods: laser induced fluorescence, laser induced incandescence, particle image velocimetry, CARS

일 정

- **6월 25일 (월요일) 오후 (서울대학교 301동(제1공학관) 305호)**
 - Lecture 1 (14:00 – 15:30): Guide to successful research/ Flow meters and their principles
 - Lecture 2 (15:50 – 17:20): Laminar burning velocity in canonical burners
- **선배와의 만남 (호암교수회관 앞 야외 바비큐, The Café)**
 - 저녁만찬 (18:00 –): 국책연구소 연구원(한국기계연구원, 국방과학연구소 등), 국내외 대학 교수들이 참석하여 진로 상담
- **6월 26일 (화요일) 오전 (서울대학교 301동(제1공학관) 305호)**
 - Lecture 3 (09:00 – 10:30): Premixed flame fundamentals
 - Lecture 4 (10:50 – 12:20): Non-premixed flame fundamentals
 - 점심 도시락 제공
- **6월 26일 (화요일) 오후 (서울대학교 301동(제1공학관) 305호)**
 - Lecture 5 (14:00 – 15:30): Edge flame fundamentals
 - Lecture 6 (15:50 – 17:20): Easy and essential laser diagnostics for flame experiments; Challenges for experimental combustion researches

참가비: 30만원(현장 결제), 별도 교재 없음