Light of the world, we gather here to celebrate, as one community and with much delight, the splendid, hard-won achievements of our graduates.

We see them here, surrounded and well-supported by the love and dedication of family and friends, teachers and staff; perhaps never again in a single instant to be among so many who truly comprehend the depth of this effort.

It is a special community, this, one that appreciates the elegant beauty of mathematics, the power and possibilities of computation, the excitement of scientific knowledge and its practical application, from first principles to complex systems.

Here we are, grown in so many ways over these years together, physically and mentally, in knowledge, in experience, and in character, possessing the training and the talents to stand at the ready, a robust and diverse set of tools at hand, to solve problems already defined and contemplate those as yet unregarded. We will not wait idly for wisdom and experience to aggregate as they flow past us, but will eagerly engage in our chosen professions, our further education, and life itself.

Some years ago, while working in Pakistan, I met a Canadian professional engineer, consulting on a major hydro-electric project. We would talk shop, and I quickly realized that EE’s are not the only engineers who can wield a slide rule. In fact, this P.E. was so mathematical, he relegated biology to the realm of chemistry which is really physics which is really mathematics.

Behold your isomorphic truism: The entire body of scientific knowledge reduced to a single framework!

Now lest we offend, or reveal our ignorance, we all know how completely this hierarchy has been turned on its ear, or better yet, edges, but for the sake of completion, let us extend this relationship one step further, and assert that all mathematics is really philosophy.

So today, as each of you eyes this podium that is soon to be your launch pad, what manner of philosophical muses will you be, you who are so analytically trained? In what playful and sustaining manner will you engage with the world, to carry you through times both easy and challenging? How will you make your mark with competence, dignity and compassion? What, exactly, have we learned? What, exactly, do we celebrate today?
Perhaps it is this:

That we can tease out the meaningful from the superfluous, by removing appropriately-selected edges of a graph in order to reveal its true nature.

That diversity of faith and background, attitude and culture, like a network's multiple pathways, affords us robust, redundant, resilient systems.

That mass, energy, and momentum must be conserved, but a kindness or a smile may propagate forever.

That strain gauges can assess structural integrity, but identifying load-bearing colleagues taps an entirely different set of skills.

That signal-to-noise ratios will surely degrade, but we possess the intelligence, wit, and goodwill to recondition, boost, and filter.

That human interactions can be complex, but respectful consensus-building can reduce that complexity from exponential to $N \log(N)$.

That at various times, personal survival demands one be a catalyst or an inert gas, but that Nature, with its carbonate buffer systems and meandering rivers, probably prefers us in dynamic equilibrium.

That Will Shakespeare was really thinking “heat transfer is fluid dynamics is electrical conductance” when he said, “A rose by any other name would smell as sweet.”

That at a certain threshold, a context-switching human, like an under-resourced microcontroller, begins to thrash.

That increasing entropy will be your constant companion, and just as a crystal needs an undisturbed environment in order to grow its lattices, so, too, do we busy humans need quiet time to grow and heed our inner spirit.

That for those of us left behind here in The College of EM, your collective EM waves will long oscillate, with their wavelengths of laughter and frustration, triumphs and mischief, in the Cool Room, 246 Votey, and Perkins lounge.

We began, all those years ago, with the three R's: 'reading, 'riting, and 'rithmetic. Now we graduate to the four L's: living, laughing, learning and loving.

As we begin this ceremony, may we resolve to have the courage to truly live, to laugh with others and at ourselves, to be ever curious about the world and its stakeholders of all species, and to be hungry for knowledge.
May we have the strength to be tender, to express and cherish love in its infinite variants, towards people, towards the environment, towards the truth; to live simply so that others may simply live.

May we, with our privileged education and special expertise, stay informed as citizens of the world, and competent in our craft, so we can muster the courage to take an unpopular stand when we recognize danger; to be, as Mahatma Ghandi has taught us, “the change you want to see in the world.”

May we, being ever philosophical, strike our best balance between altruism and self-preservation, as Rabbi Hillel taught us over 2000 years ago:

If I am not for myself, who will be for me?
And when I am only for myself, what am I?
And if not now, when?